



national institute for advanced studies



CLEARINGHOUSE

EVALUATION OF  
MEDICAID ADMINISTRATIVE COSTS

FINAL REPORT

Contract Number HCFA 500-78-0067

June 10, 1980



NATIONAL INSTITUTE FOR ADVANCED STUDIES  
1133 Fifteenth Street, N.W., Suite 1000  
Washington, D.C. 20005  
(202) 857-1900

CLEARINGHOUSE

John Rhodes, Project Director  
Lucinda Gerson  
Carol Eggleston

EVALUATION OF  
MEDICAID ADMINISTRATIVE COSTS

FINAL REPORT

Contract Number HCFA 500-78-0067

June 10, 1980

Prepared for:

Health Care Financing Administration  
U.S. Department of Health, Education and Welfare

This report is made pursuant to Contract No. HCFA 500-78-0067.  
The names of the persons employed or retained by the contractor  
with management or professional responsibility for such work or  
for the content of the report are listed above.





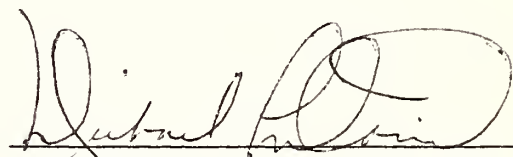
## ACKNOWLEDGEMENTS

As a firm actively involved in the evaluation of federal health delivery and health financing programs, the National Institute for Advanced Studies is pleased to present this Final Report, Evaluation of Medicaid Administrative Costs. We believe that this report represents a significant contribution to current national deliberations of Medicaid policy.

This study has benefited significantly from the cooperation and assistance of the State Medicaid Directors and their staffs and would not have been possible without the sponsorship of the Medicaid Directors Council, chaired by Mr. Glenn Johnson of Pennsylvania. Although we cannot name every person who contributed to the study, we wish to thank the following persons most responsible for the design and/or data collection: Messrs. Jack Worthington and Donald Olive of Alabama; Messrs. Rod Betit and David Davidson of Alaska; Ms. Sharon Marcum of Arkansas; Messrs. Gary Toerber and Pete Lichty of Colorado; Messrs. Stephen Press and Robert Schreiber of Connecticut; Mr. Richard Cherrin of Delaware; Dr. Joseph Payne of Washington, D.C.; Messrs. Walter Conwell and Fred Roberson of Florida; Ms. Chris Leathers and Messrs. Tom Smith and Gordon Kitchens of Georgia; Mr. Derek Wang of Idaho; Messrs. Jeffrey Miller and Norman Ryan of Illinois; Mr. John Buenting of Iowa; Messrs. William Vassallo and Pat McClaim of Kentucky; Messrs. Alvis Roberts and Jake Canova of Louisiana; Mr. Lawrence Triplett of Maryland; Ms. Althea Glick of Massachusetts; Mr. Jack Estes of Mississippi; Mr. Fred Wilcox of New Hampshire; Messrs. Thomas Russo and James Houston of New Jersey; Mr. James Gibson and Ms. Daphne Lyons of North Carolina; Mr. Leroy Bollinger of North Dakota; Messrs. Floyd Smoke, Bob Lewis and Floyd Zayre of Ohio; Mr. Glenn Johnson and Ms. Izanne Leonard-Haak of Pennsylvania; Mr. Onan Perez of Puerto Rico, Mr. John Cook of South Carolina; Mr. Billy Moates of Tennessee; Mr. Irv Ratcliff of Utah; Mr. Robert Treibley of Virginia; Mr. Phillip Lynch of West Virginia; and Mr. Ernest Rumpf, Jr. of Wyoming.



In addition, we wish to extend our appreciation for the guidance and thoughtful review provided by the Project Officer, Mr. William Gefell, and Mr. William Hickman of HCFA. Finally, we wish to extend our sincere appreciation to the NIAS staff members who devoted every effort toward making this a quality product.

A handwritten signature in dark ink, appearing to read "Michael L. Davis", written over a horizontal line.

Michael L. Davis, Chairman  
Board of Directors



# TABLE OF CONTENTS

	<u>Page</u>
I INTRODUCTION	1
Study Background	2
II DATA COLLECTION METHODOLOGY	6
Development of the Data Collection Instrument	6
Data Collection and Editing	18
III RESULTS OF REPORTING TEST	26
Test Results: Response Rate, Accuracy of Data, Respondent Burden	26
Recommendations for Subsequent Data Collection Efforts	34
IV ANALYSIS OF MEDICAID ADMINISTRATIVE COST AND STAFFING DATA	56
Introduction	56
Discussion of Data Submitted	57
Medicaid Administrative Costs: Total	60
Medicaid Administrative Costs: By State	65
Medicaid Administrative Costs: By Function and Subfunction	67
Medicaid Administrative Costs By Type: Personnel, Other Direct and Indirect	127
Salaries and Full-Time Equivalent Personnel	131
Other Indicators: Costs as a Percent of MAP and Cost per Recipient	139
Special Analyses: Eligibility Determination, EPSDT, Utilization Review and Claims Pro- cessing	143
Conclusions to Data Analysis	164
Appendix	177



# GRAPHS/TABLES

		<u>Page</u>
Table B-1	Data Reported By Functional Area By State	59
Table C-1	Costs And Percentages By Functional Area	61
Graph C-1	Percentages Of Costs By Functional Area	62
Table C-2	Average Cost And Unweighted Percentages By Functional Area	63
Graph C-2	Unweighted Percentage Of Costs By Functional Area	64
Table E-1	Costs By Functional Area And By State	68
Table E-2	Proportion Of Costs By Functional Area And By State	69
Graph E-1	Functional Area #1 (General Administration)	74
Graph E-2	Functional Area #2 (Training)	75
Graph E-3	Functional Area #3 (Beneficiary Services)	76
Graph E-4	Functional Area #4 (Quality Control)	77
Graph E-5	Functional Area #5 (EPSDT)	78
Graph E-6	Functional Area #6 (Provider Services)	79
Graph E-7	Functional Area #7 (Claims Processing)	80
Graph E-8	Functional Area #8 (Surveillance/Utilization Review)	81
Graph E-9	Functional Area #9 (Payment Recovery)	82
Graph E-10	Functional Area #10 (Fraud Control)	83
Graph E-11	Functional Area #11 (Institutional Reimbursement)	84
Graph E-12	Functional Area #12 (Non-Institutional Reimbursement)	85
Table E-3	Subfunctional Costs For #1 General Administration By States	88
Table E-4	Subfunctions As A Percentage Of Functional Cost For #1 General Administration By State	89
Table E-5	Subfunctional Costs For #3 Beneficiary Services By State	93
Table E-6	Subfunctions As A Percentage Of Functional Cost For #3 Beneficiary Services By State	94
Table E-7	Subfunctional Costs For #4 Quality Control By State	97
Table E-8	Subfunctions As A Percentage Of Functional Cost For #4 Quality Control By State	98
Table E-9	Subfunctional Costs For #5 EPSDT By State	101
Table E-10	Subfunctions As A Percentage Of Functional Costs For #5 EPSDT By State	102
Table E-11	Subfunctional Costs For #6 Provider Services By State	105





# GRAPHS/TABLES (CONT'D)

	<u>Page</u>
Table E-12 Subfunctions As A Percentage Of Functional Costs For #6 Provider Services By State	106
Table E-13 Subfunctional Costs For #7 Claims Processing By State	111
Table E-14 Subfunctions As A Percentage Of Functional Cost For #7 Claims Processing By State	112
Table E-15 Subfunctional Costs For #8 Surveillance/Utilization Review By State	115
Table E-16 Subfunctions As A Percentage Of Functional Cost For #8 Surveillance/Utilization Review By State	116
Table E-17 Subfunctional Costs For #9 Payment Recovery By State	118
Table E-18 Subfunctions As A Percentage Of Functional Cost For #9 Payment Recovery By State	119
Table E-19 Subfunctional Costs For #10 Fraud Control By State	121
Table E-20 Subfunctional As A Percentage Of Functional Cost For #10 Fraud Control By State	122
Table E-21 Subfunctional Costs For #11 Institutional Reimbursement By State	124
Table E-22 Subfunctions As A Percentage Of Functional Cost For #11 Institutional Reimbursement By State	125
Table F-1 Breakout Of Costs Direct, Indirect, Etc.	129
Table F-2 Costs By Type In Percentages	130
Table G-1 Total Personnel And Functional Area Having Cost Data	132
Table G-2 Average Annual Salary Per FTE By Functional Areas	133
Table G-3 Total FTE's By Functional Area	137
Table G-4 Percentage Of Eight States/FTE's	138
Table H-1 Administrative Costs As A Percent Of Medical Assistance Assistance	140
Table H-2 Comparison Of Rankings Of State's Administrative Cost Per Recipient Versus Ranking Of Number Of Recipients	142
Table I-1-a Eligibility Determinations/Redeterminations By Category By State	145
Table I-1-b Cost Per Determination And Determination Per FTE By State	147
A. Aged, Blind, Disabled	
B. Medically Needy	
C. Other Categorically Eligible	



# GRAPHS/TABLES (CONT'D)

	<u>Page</u>
Table I-2    Early Periodic Screening, Diagnosis And Treatment	150
Table I-3-a    Reviews:   Prior Authorization, Professional Pre-Payment, And Post-Payment By Claim Categories	152
Table I-3-b    Cost Per Review By Reporting State	153
Table I-4-a    Line Items By Type Paid And Denied By State	157
Table I-4-b    Percentage Claim Of Total By Type Lines Paid/Denied By State	161
Table I-4-c    Cost Per Claim Processed By Type of Claim	168
Table I-5      Cost Per Claim - Fiscal Agent Vs. In-House	171

# Table 1-1

Table 1-1: Summary of the data for the first set of experiments.

Table 1-2: Summary of the data for the second set of experiments.

Table 1-3: Summary of the data for the third set of experiments.

Table 1-4: Summary of the data for the fourth set of experiments.

Table 1-5: Summary of the data for the fifth set of experiments.

Table 1-6: Summary of the data for the sixth set of experiments.

Table 1-7: Summary of the data for the seventh set of experiments.

Table 1-8: Summary of the data for the eighth set of experiments.

## I. INTRODUCTION

Title XIX of the Social Security Act, commonly referred to as Medicaid, is rooted in almost thirty years of prior federal and state experience in paying for medical care for needy people under the public assistance programs of the Social Security Act. In 1965, two major amendments to the Social Security Act dramatically expanded the role of federal and state governments in health care financing. Title XVIII established the nationwide hospital and medical insurance program popularly known as Medicare which is federally administered as part of the National Social Security Program. Title XIX established the federally supervised but state operated medical assistance vendor payment program in which the federal and state governments share the cost of providing medical care to the categorically eligible, and, in some states, the medically needy.

At the annual spring meeting of the State Medicaid Directors Council in 1978, the Directors passed a resolution requesting the Health Care Financing Administration to join with them in conducting a nationwide study of Medicaid administrative costs. This study was conducted through the auspices of the State Medicaid Directors Council. The Council worked with the Health Care Financing Administration (HCFA) in the development of the data collection instrument and provided technical support throughout the design of the instrument. The Health Care Financing Administration contracted with the National Institute for Advanced Studies (Contract # 500-78-0067) to assist in administration of the study, analysis of the data and preparation of this final report.

The purposes of this study were to provide both the states and the Health Care Financing Administration with a better understanding of the costs involved in administering the Medicaid Program, as well as to assess the feasibility of initiating an ongoing



reporting system for detailed administrative cost data. The study addressed the issue of resource allocation among the various functional areas or cost-centers of Medicaid administration, both in terms of dollars and manpower. In addition, workload data were collected in the areas of eligibility determination, surveillance and utilization review, and claims processing, in order to better understand costs in these areas. The claims processing recap schedule was designed to distribute the costs reported for claims processing among the various types of claims and yield a unit cost. Appendix A contains the survey instrument package (Cost Matrix, Other Workload Data Form and Claims Processing Recap Schedule) which was mailed to the 53 Medicaid states and territories.

The information was to be collected for the period January through March, 1979 and completed forms were to be sent to the National Institute for Advanced Studies by April 30, 1979. The State Medicaid Directors Council mailed the survey instrument to all 53 Medicaid states and territories.

This report is divided into four chapters. Chapter I gives a brief history of the study organization and background. Chapter II gives an overview of the study methodology. Chapter III details the prototype reporting system test results and sets forth recommendations for future action. The fourth and final chapter presents an analysis of Medicaid administrative cost data.

## STUDY BACKGROUND

States participating in the Medicaid Program have been required to submit reports concerning their administrative costs since the program's inception. From time to time, there have been changes in the reporting format and the data requested but some administrative cost data have always been available. The data available, however, have been reported in gross dollars allocated for overall administration of the program. The data provided no insights into the cost of the different functions being performed under the heading of administration.





As Medicaid expanded, higher matching rates (federal share of costs) were offered to the states as a means of promoting certain aspects of the program. The Medicaid Management Information System (MMIS) is an example. States receive a 90% match for approved MMIS developmental costs and a 75% match for approved MMIS operational costs in contrast to the standard matching rate of 50% for most administrative expenses. The benefits of an MMIS plus the matching incentives have induced states to develop and operate MMIS's. Heretofore, the claiming procedures and reporting requirements for the higher federal matches gave limited insight into the allocation of administrative resources within a state. In order to better understand how states administer the Medicaid Program, answers to the following questions were needed:

- How do states allocate their Medicaid administrative resources according to various functional and cost categories?
- Why do states allocate administrative resources in the manner that they do?
- What are feasible indicators of administrative resources adequate for federal monitoring purposes?

As a means of answering these and subsidiary questions, a case study approach was pursued in 1976-77 in a previous study conducted by NIAS.<sup>1/</sup> In the case studies for each of six selected states, both quantitative and qualitative information was obtained on-site from state Medicaid personnel. Based on interviews with personnel responsible for various segments of the Medicaid organization, the costs and revenues were allocated to the following nine functional areas: General Administration, Training, Recipient Services, Provider Services, Claims Processing, Surveillance and Utilization Review, Third-Party Liability, Fraud Control and Cost Settlement. Costs and revenues for each functional area were further classified according to the appropriate Federal Financial

---

<sup>1/</sup> Evaluation of Medicaid Administrative Costs; March, 1978; Contract No. SRS 500-76-0513.



Participation (FFP) percentage. In addition, Medicaid administrative costs by functional area were allocated to the cost categories of personnel, travel, electronic data processing, and other, thereby resulting in a large, detailed Cost Matrix.

The states were selected to provide representation of the following characteristics of Medicaid programs:

- Total Medical Assistance Payments (MAP)
- Total administrative and training costs
- Administrative and training costs as a percent of the total MAP
- Percentage of federal portion of total administrative and training costs

Other criteria used in the final selection process included:

- Inclusion of medically indigent clients in the program
- Decentralization of eligibility determination
- Whether or not claims processing was performed by a fiscal agent; whether or not claims processing was computerized
- Prior experience in the state
- Willingness to participate

Originally, the following seven states were selected for the case study: Illinois, Virginia, Washington, Arkansas, Maine, Utah and Wisconsin. Wisconsin was eliminated during the course of the study due to difficulties in obtaining reasonably adequate and accurate administrative cost data. The study determined that:

- (1) Of the nine broad functional areas, Recipient Services (primarily eligibility determination) is the major component of administrative costs in four of the six states. Claims Processing accounts for 20% to 32% of the administrative costs in the states examined with the exception of Illinois. Illinois' lower costs in that area appeared to result from economies of scale.



- (2) Of the four cost categories, personnel costs (salaries and fringe benefits) account for the major share of total administrative costs, averaging 62% in the six states studied.
- (3) Administrative costs constitute 3.5% to 8.2% of Medical Assistance Payments.

Because of the usefulness of the data collected in the six-state study, interest was evidenced in collecting similar information in all states.

At the March, 1978, State Medicaid Directors Council meeting, the Directors recommended that HEW conduct a nationwide assessment of Medicaid state agency resources. In order to ascertain the capability of the Single State Agencies to meet any potential Federal Medicaid administrative cost reporting requirements, it was decided that a detailed instrument accompanied by step-by-step instructions would be used to collect the administrative cost information. The instrument was to include data on staffing, data processing equipment and contracted services, as well as direct and indirect costs in each of twelve functional areas (see Cost Matrix in Appendix A). Since the instrument was the suggestion of the Directors Council, the study's technical approach was designed for both HCFA and the Medicaid Directors Council to play major roles. The resulting approach is briefly outlined in the following chapter along with a chronology of the resulting study effort.



## II. DATA COLLECTION METHODOLOGY

This chapter presents a brief description of the efforts undertaken by NIAS to collect the data analyzed in Chapter IV. The actual techniques used to analyze the data are deferred to Chapter IV to avoid redundancy and provide a logical flow of the analyses undertaken in that chapter. We have partitioned our discussion of the data collection effort into a discussion of the development of the instrument and a discussion of the efforts undertaken to elicit state response.

### DEVELOPMENT OF THE DATA COLLECTION INSTRUMENT

The purpose of the data collection instrument in the present study was to provide an inventory of administrative costs as distributed among various functional areas that are integral to administering the Medicaid Program. This inventory would provide the states, DHEW and the Congress with a far clearer picture of resource distribution. Such an inventory would provide a basis for discussions regarding operation, funding and reporting in the functional areas of Medicaid administration. In addition, output data reviewed in conjunction with administrative costs would potentially yield comparative measurements of productivity. Collecting and compiling this information would require a large effort. For this effort a survey approach was selected because it would allow the collection of data from more states than could be included in a case study approach given the limited contract funds. Furthermore, by requesting the states to fill out the forms, the study survey could serve as a test of state capability to report more detailed administrative cost and workload data than currently required. Each state would receive a data collection instrument to be





completed and returned. The instrument was based on that used for the six-state study, modified and expanded to include more detailed cost information as well as workload/output data.

States were asked to submit data on actual administrative costs and workload for the three-month period of January through March, 1979. NIAS assisted the states with the data collection and reporting through a scheduled set of telephone contacts designed to anticipate questions the states might have at different stages of their response effort. This telephone assistance was in sharp contrast to the intensive team site visits which were made to each of the six states in our previous study. After receiving the states' completed instruments, NIAS would analyze the data and present to HCFA both analytical results and recommendations for future data collection efforts (Chapters IV and III of this report, respectively).

#### The Data Collection Instruments

The data collection instrument was designed to address the issue of resource allocation in terms of dollars and manpower. In these terms and in terms of its format, the instrument used in this study was similar to and in fact a derivative of the instrument used in the previous NIAS six-state study. Developmentally, the survey instrument of the current study is a derivative of the first instrument. Each was designed to capture administrative cost data across administrative functional areas. The two share common definitions for some functional and subfunctional areas. Each sought personnel costs and the number of full-time equivalent persons (FTE) in each functional area. There were, however, significant differences between the two instruments.

The NIAS six-state study had among its objectives the determination of the impact of higher Federal Financial Participation (FFP) upon the allocation of resources to certain activities. Data and substantial insights into the effects of FFP were obtained



through the interviewing of state Medicaid personnel, including the Directors, during the study. The study provided a more thorough understanding of the adequacies and deficiencies of FFP policies which pertain to Medicaid administrative costs. This study does not share the FFP objective with its predecessor.

Perhaps the most significant difference between the two instruments was the expanded scope of this study's instrument. In addition to functional areas, it was designed to collect workload data in the areas of eligibility determination and redetermination, surveillance and utilization review, and claims processing. Extensive consideration was given to the area of claims processing through the use of a "Claims Processing Recap Schedule" form which appears in Appendix A. A strictly volume based unit cost methodology was ruled out on the basis of its limited value for comparative purposes due to differences in services covered, types of claims used, and claims processing procedures from state to state. These forms were used to collect information on the day-to-day workloads associated with administering the Medicaid Program which, when reviewed in the light of the cost data, resulted in the special analyses contained in Chapter IV of this report.

If the greatest difference between the two instruments was the scope of the data collection, the more subtle differences were in the changes made in the functional areas. Each instrument was designed to capture all aspects of Medicaid administrative costs; the instrument for this study, however, captured these data in greater detail. To illustrate these differences, each of the functional areas of this study will be listed opposite its corresponding data area from the NIAS six-state study. Each area listing will be followed by a brief narrative discussing the differences and the changes made.



## General Administration

<u>National Study</u>	<u>Six-State Study</u>
1. General Administration	1. General Administration
A. Federal Statistical Reporting	A. Federal Statistical Reporting
B. Federal Financial Reporting	B. Information Systems Planning
C. State Internal Reporting	C. Other Administrative
D. Planning and Policy	
E. Automated Data Processing (ADP)	
F. Other General Administration	

In total, General Administration is the same for both studies. The national study, however, captured the costs for this area in greater depth. Area 1.A, Federal Statistical Reporting, was the same in both studies. Area 1.B, Information Systems Planning, in the six-state study was very specific. In this study, the Systems Planning subfunction was incorporated into a more general category, 1.D. Planning, and Policy.

A major difference between the two studies was the treatment of Automated Data Processing (ADP) costs. In the six-state study it was treated as a cost element; in the current study it is treated as a subfunction. Treating ADP as a subfunction allowed this study to capture a more refined picture of the cost elements that are included in ADP expenditures. Treating ADP as a cost element as in the six-state study provided a better understanding of the relationship between subfunction and ADP but provided no details on the elements comprising ADP costs. Each approach has its benefits, but both capture the essential cost data.

Finally, each study had an "Other" subfunction. All of the elements of the current study not included in the six-state study (1.B Federal Financial Reporting, 1.C. State Internal Reporting, and 1.D Planning and Policy [except for Information Systems Planning]) were picked up in the six-state study under 1.C Other Administrative.



## Training

<u>National Study</u>	<u>Six-State Study</u>
2. Training	2. Training

There are no differences between the two studies in this functional area.

## Beneficiary Services

<u>National Study</u>	<u>Six-State Study</u>
3. Beneficiary Services	3. Recipient Services
A. Eligibility Determination	A. Eligibility: Determination
(1) aged, blind, disabled	B. Eligibility: Quality
(2) other categorically	Control
needy	C. Other Recipient Services
(3) medically needy	
B. Eligibility Redetermination	
C. ADP	
D. Other	

During the six-state study, Beneficiary Services were labeled Recipient Services. For the National Study, eligibility was broken into two subfunctions; 3.A Eligibility Determination (initial determination) and 3.B Eligibility Redetermination. The first subfunction was further broken into eligibility types. For the six-state study all of these data were captured under 3.A Eligibility: Determination with no further breakdown.

Throughout the six-state study, ADP was handled the same as described under General Administration.

The two "Other" subfunctions, 3.D Other and 3.C Other Recipient Services, are basically equivalent. 3.B Eligibility: Quality Control, in the six-state study did not have a corresponding subfunction under Beneficiary Services. Its corresponding element was included under Quality Control, and will be discussed under that subfunction.





## Quality Control

### National Study

- 4. Quality Control
  - A. Eligibility Review
  - B. Third-Party Liability (TPL) Review
  - C. Claims Processing (CP) Review

### Six-State Study

No parallel function. Corresponding data elements found under:

- 3. Recipient Services
  - B. Eligibility: Quality Control
- 7. Third-Party Liability
- 5. Claims Processing

Quality Control, as a functional area, was not included in the six-state study. The costs resulting from the activities related to ensuring quality control were spread among the various subfunctions listed above. Some of the translations between the two studies are obvious. Costs for 4.A Eligibility Review under Quality Control were picked up under 3. Recipient Services B. Eligibility: Quality Control. Not quite as straightforward are categories 4.B Third-Party Liability (TPL) Review and 4.C Claims Processing (CP) Review. In the six state study there was a separate functional area for Third-Party Liability (Area #7) and for Claims Processing (#5). These areas were all-encompassing, including every aspect of Third-Party Liability and Claims Processing but without further breakdown. It is in these respective areas that 4.B and 4.C of the current study were captured in the previous study. They were not captured as distinct elements, however, so their exact costs are unknown.



EPSDT

National Study

5. EPSDT

- A. Informing and Notification
  - (1) manual
  - (2) automated
- B. Outreach
- C. Case Management & Follow-Up
  - (1) manual
  - (2) automated
- D. General EPSDT Administration

Six-State Study

No parallel function. Corresponding data elements found under:

- 4. Provider Services
  - A. EPSDT: Patient Care
  - B. EPSDT: Administrative

EPSDT was not included as a functional area in the six-state study. Data for this aspect of the Medicaid Program were captured under Provider Services subfunction, A. EPSDT: Patient Care, and B. EPSDT: Administrative. Subfunction A consisted of activities involved in outreach, notification, case management, and follow-up. Subfunction B consisted of activities involved in provider relations and enrollment, and state and local administration.

This study divided the activities covered in subfunction A EPSDT: Administrative of the six-state study into the three subfunctions: 5.A Informing and Notification; 5.B Outreach; and 5.C Case Management and Follow-Up. Further, subfunctional costs in 5.D General EPSDT Administration is roughly equivalent to the previous study's category 4.B EPSDT: Administrative.



## Provider Services

### National Study

- 6. Provider Services
  - A. Physician
  - B. Pharmacy
  - C. HMO
  - D. Hospitals
  - E. Long-Term Care (LTC)  
Facilities: Certi-  
fication
  - F. LTC Facilities: Medical  
Reviews & Independent  
Practitioner Reviews
  - G. LTC Facilities: Other
  - H. Dental
  - I. Other Providers
  - J. ADP

### Six-State Study

- 4. Provider Services
  - A. EPSDT: Patient Care
  - B. EPSDT: Administrative
  - C. Physician
  - D. Family Planning
  - E. Pharmacy
  - F. Pathology and Radiology
  - G. HMO's
  - H. Clinic
  - I. Hospitals
  - J. Long-Term Facilities:  
Medical Reviews and Inde-  
pendent Practitioner Reviews
  - K. Long-Term Care Facilities:  
Other
  - L. Dental
  - M. Other Provider Services

At first glance, the six-state study would appear to have a more detailed breakdown for the functional area, Provider Services. Closer examination reveals this is not the case. Two of the subfunctions in the six-state study (A & B) were expanded into an entire functional area (Area #5 EPSDT) for the national study. Both studies had subfunctions under Provider Services for costs relating to Physicians, Pharmacies, HMO's, Hospitals and Dental Care.

Three subfunctions were used to collect data regarding Long-Term Care (LTC) facilities in this study. The NIAS six-state study utilized only two. The difference occurred in the handling of LTC facilities' certification costs. The six-state study included these costs in the subfunction K. Long-Term Care Facilities: Other. The national study had a separate subfunction (E. LTC Facilities: Certification) for certification costs.

ADP costs were given a separate subfunction under Provider Services in the national study. The six-state study treated ADP (EDP) as a cost category. A fuller discussion of the difference is included in this section under General Administration.

The remaining subfunction of the current study is I. Other Providers. This subfunction captures all the costs included under



subfunctions D. Family Planning, F. Pathology and Radiology, H. Clinics, and M. Other Provider Services of the six-state study. These four subfunctions of the previous study were compressed into the I. Other Provider subfunction of the national study due to the scarcity of data encountered during the six-state study for the multiple subfunctions. It was felt that combining the four would make collecting Provider Services data easier for the respondents without sacrificing significant data detail.

### Claims Processing

<u>National Study</u>	<u>Six-State Study</u>
7. Claims Processing	5. Claims Processing
A. Developmental Costs	
a) Hardware (developmental share)	
b) Software development	
c) Site Preparation and other implementation costs	
d) Information Systems Planning	
B. Operating Costs	
a) Hardware (Operating share)	
b) Maintenance Software	
c) Data entry	
d) Computer operations	
e) Manual claims processing	

These two subfunctions are basically the same in the data that they are intended to capture. The national study, however, captured the Claims Processing Costs in much greater detail. In fact, this functional area of the national study was the most detailed area of the study. It recorded data two levels below the subfunctional level. Though not shown on the listing above, costs for hardware, software, etc. under both Developmental and Operating Costs were further broken down as In-house or Fiscal Agent costs. All of these costs were included under Claims Processing in the six-state study but without any detail or breakdown.





## Surveillance and Utilization Review

<u>National Study</u>	<u>Six-State Study</u>
8. Surveillance and Utilization Review	6. Surveillance and Utilization Review
A. Prior Authorization/ Approval	
B. Professional Pre-Payment Review	8. Fraud Control
C. Post-Payment Review	A. Fraud Control: Detection
D. ADP	

8.A Fraud Control: Detection from the six-state study has also been included as an element parallel to 8. S/UR of the national study. One of the purposes and benefits of engaging in S/UR activities is the ability to detect possible instances of fraud. As a distinct cost with S/UR, fraud detection costs would be nearly impossible to segregate because only a small minority of cases involving improper utilization represent actual fraud. The treatment of this functional area is much the same as Claims Processing. The two are equivalent in the data captured but the national study captures it in greater detail. ADP (EDP) costs are handled in the same fashion as in the functional area General Administration.

## Payment Recovery

<u>National Study</u>	<u>Six-State Study</u>
9. Payment Recovery	No parallel function. Corresponding data elements found under:
A. Third-Party Liability: Pre-and Post Payment Recovery	7. Third-Party Liability
B. Provider Recovery	

There was no functional area similar to Payment Recovery in the six-state study. Subfunction A. of Payment Recovery collected the same data recorded under functional area 7. Third-Party Liability of the six-state study. Provider Recovery was not adequately addressed during the six-state study so it was included as a subfunction under the new functional area Payment Recovery.

## Fraud Control

<u>National Study</u>	<u>Six-State Study</u>
10. Fraud Control.	8. Fraud Control
A. Investigation	A. Fraud Control: Investigation
B. Prosecution	B. Fraud Control: Prosecution



Under Fraud Control, the two subfunctions addressing Investigation and Prosecution in the national study are identical to the subfunctions addressing these activities in the six-state study. As discussed earlier, data for subfunction A. Fraud Control: Detection of the six-state study are recorded under 8. S/UR of the national study.

#### Institutional Reimbursement

<u>National Study</u>	<u>Six-State Study</u>
11. Institutional Reimbursement	9. Cost Settlement
A. Rate Setting	A. Cost Settlement: Hospitals
B. Hospital Cost Settlement and Audit	B. Cost Settlement: Long-Term Care Facilities
C. Long-Term Care Cost Settlement and Audit	

The current study handled Reimbursement of Institutions somewhat differently from the six-state study. The difference occurred in the recording of rate setting costs. The initial six-state study included rate setting for Hospitals as part of subfunction A. Cost Settlement: Hospitals; rate setting costs for LTC facilities were included in subfunction B. The national study took rate setting costs out of the Hospital and LTC subfunction and collected these costs under their own subfunction, A. Rate Setting. The two remaining subfunctions are identical to the subfunctions of the preceding study except for rate setting costs.

#### Noninstitutional Reimbursement

<u>National Study</u>	<u>Six-State Study</u>
12. Noninstitutional Reimbursement	No parallel function.

Noninstitutional Reimbursement was not included in the six-state study as a functional area. The national study included a function for these costs after reviewing the results of the preceding study and consulting with Medicaid officials.



As this area by area discussion has shown, the instrument for this study has many common elements with the instrument used in the preceding study. The major differences are the inclusion of more functional areas and the expansion of areas to allow the gathering of more specific and detailed data.

Council Review. Representatives of the State Medicaid Directors Council met on October 10, 1978 and discussed the draft survey instrument. Representatives from, Georgia, Maryland, Oklahoma and Wyoming attended the sessions and made valuable suggestions regarding final development of the instrument. The following is a list of twelve recommendations put forward by the Council's representatives and included in the final instrument.

Council Suggestions

- Use generally accepted accounting definition of indirect cost; eliminate overhead from direct cost elements; break out direct from indirect costs in fiscal agent contracts;
- Differentiate between manual and ADP costs of several functions;
- Develop a separate recap for utilization review costs;
- Track the period January - March 1979, to give states time to prepare for data collection;
- Drop "Beneficiary Recovery" as a subcategory under "Payment Recovery" functional area;
- Develop subcategories under "Quality Control" functional area;
- Change cost allocation guidelines (for "Quality Control" and "Eligibility Determination")
  - Allow greater flexibility to states
  - Provide a more realistic picture of Medicaid incurred costs



- Collect workload data on number of claims denied;
- Add a "Policy and Planning" subcategory to the "General Administration" functional area;
- Add crossover claims and buy-in premium payments to claims listing on the claims processing Recap;
- Break out costs of contracts on the matrix; and
- Revise Claims Processing Recap to reflect manual processing time and cost.

The instrument that emerged from these changes was used for the study and is included in this report in Appendix A.

#### DATA COLLECTION AND EDITING

As recommended by the Directors Council, the data collection period was changed to January - March 1979. It had been originally scheduled for October - December 1978. The suggestion was accepted in order to allow the person(s) assigned by the Medicaid Directors time to prepare for the data collection effort in advance of the data collection period. The Council took lead responsibility in distributing the instrument to the fifty-three Medicaid jurisdictions. Mr. Glenn Johnson, Chairman of the Council and Medicaid Director for the Commonwealth of Pennsylvania, requested in his memorandum accompanying the instrument that all Medicaid Directors cooperate with the study effort by participating in the data collection. The data collection instrument was mailed to the Directors on November 30, 1978.

The Directors Council sent out the instrument to emphasize the importance of the study to the Directors and to demonstrate the Council's support of the study effort. It was hoped that this approach would stimulate the highest degree of cooperation possible from the Medicaid Directors. Completion of the data collection instrument was recognized by HCFA and the Council as a major undertaking. The cost matrix, itself, had nearly seven hundred cells and the workload data instruments had approximately two hundred.





Prior to this study no attempt had been made to collect this much detailed information about the cost of state level administration of the Medicaid Program.

Technical Assistance. Realizing that the State Directors and their staffs would need assistance with this study, NIAS as a first step, prepared a "How To" manual explaining methods for preparing and completing the study. Specifically the manual contained:

- Background information regarding the study and its predecessor;
- An explanation of the purposes of the data collection instrument;
- Suggestions on source documents which might be referenced for the requested data;
- Definitions of all functional areas and all data elements requested;
- Specific instructions regarding cost allocation guidelines; and
- General Guidelines for completing the cost matrix.

The manual was prepared in draft form and submitted to HCFA for comment. Revisions were made on the manual and the final version was sent to the individual State Directors on December 26, 1978.

Included in the manual was a mailback response card on which states identified the person responsible for completing the forms and acknowledged receipt of the November mailing. Upon receipt of the manual, the form was to be detached and returned to NIAS. The returned forms made up the catalog of persons responsible in each state for completing the study. States were not as diligent in returning the response card as was hoped. This necessitated calling the Medicaid Directors directly.

The second step in NIAS' plan to provide assistance began January 17, 1979 and was completed by March 2nd. During this time all forty-nine of the adjacent Medicaid jurisdictions were



contacted by NIAS. These calls served five purposes. The calls allowed NIAS staff to:

- (1) introduce themselves to the persons responsible for completing the cost matrix;<sup>1/</sup>
- (2) ensure that states which did not return the mail-back form actually received the two mailouts;
- (3) further stimulate the interest of state Medicaid personnel and create a cooperative atmosphere;
- (4) identify problems as early in the study as possible; and
- (5) inform state Medicaid personnel that assistance was available by contacting NIAS.

Alaska, Hawaii, the Virgin Islands, Puerto Rico and Guam were contacted through regular mail service.

The third step in providing the states with technical assistance was the resolution of data problems. As the states telephoned with their questions, NIAS responded in one or a combination of the following ways:

- (1) questions that could be answered immediately were clarified during the conversation;
- (2) questions that were more detailed and required more in-depth answers were recorded by the NIAS staff member and the state's contact person was informed that he/she would be re-contacted with an answer within a 24-hour time period; and
- (3) if the NIAS staff person was unable to provide total clarification, the problem was referred to the project officer.

During the second step, NIAS had made each Medicaid jurisdiction aware of the availability of assistance and encouraged the responsible

---

<sup>1/</sup> In general, the persons in the various states responsible for completing this form were accountants, financial analysts, or general administrative staff in a reports, analysis or general administrative division.



person to contact NIAS as problems arose. It was felt that many states would have unique questions, not explained in the instructions manual. By assisting the states as problems arose, NIAS felt consistency of definitions and data could be assured in an accurate and cost-effective manner. Assisting states at this time would allow NIAS to reduce "after the fact" validations. Two days of technical assistance were allocated for each state.

This approach required some modification when few states contacted NIAS for assistance. Instead of waiting for states to call with their problems, NIAS initiated a second round of calls aimed at addressing any problems that states might be having with the study. These calls were also used to confirm state participation and remind them to forward their completed matrices by the reporting deadline.

None of the states was able to meet the original deadline for submitting data, April 30th. To provide states with more time, the deadline for submission was extended to June 30th. The twenty-nine states which responded and the date their responses were received are listed below:

<u>State</u>	<u>Date Rec'd</u>	<u>State</u>	<u>Date Rec'd</u>
Iowa	5/03	Illinois	6/22
Wyoming	5/07	Connecticut	6/27
Alaska	5/11	Kentucky	7/03
North Carolina	5/11	Massachusetts	7/05
District of Columbia	5/14	South Carolina	7/12
Alabama	5/21	Pennsylvania	7/13
Colorado	5/29	Idaho	7/16
Virginia	6/05	Utah	7/19
West Virginia	6/05	New Hampshire	8/01
Florida	6/11	Delaware	8/02
New Jersey	6/11	Tennessee	8/08
Maryland	6/14	Mississippi	8/20
Ohio	6/18	Louisiana	9/17
Arkansas	6/20	Puerto Rico	9/21
Georgia	6/20		



As the listing indicates, not all states were able to submit the cost and workload data sought by this study. In attempts to stimulate greater participation among the states, NIAS kept in constant contact with the Medicaid jurisdictions, offering assistance wherever possible. In addition, Richard Heim, Director of the Medicaid Bureau, sent a memorandum to each State Medicaid Director encouraging them to support the study effort. During the April, 1979 meeting of Medicaid Directors in San Diego, another request for participation in the study was made to the Directors. These efforts were quite helpful in drawing out additional participation, yet they were unable to overcome all the barriers which, for some states, stood in the way of participation in the study. Fifteen states withdrew from the study and nine more failed to respond. They cited problems with the data request, the cost of completing the matrix and workload reports, conflicting priorities and difficulty in getting data from fiscal agents as insurmountable barriers to their participation. A few states which have locally administered, state supervised Medicaid Programs stated that their decentralized administrative approach made participation in the study impossible.

#### Recontacts

Recontacting the states (by telephone) was seen as the initial step in the analysis of the data. These recontacts served two purposes: (1) the confirmation of data and the resolution of discrepancies; and (2) the clarification of data falling outside aggregated data ranges. The level of detail and complexity of the study made reporting all facets of the requested data difficult. Some responding states sent back matrices which were only partially completed. Recontact, therefore, was expanded to include in its scope the acquiring of additional information needed to fill the data gaps.







Prior to recontact, each matrix received a thorough desk edit. Questions and problems which arose during the edit were the basis for the recontact. Each state submitting a cost matrix was sent a letter of thanks, along with notification that further contacts would occur regarding questions NIAS staff had about the data. This letter included examples of the types of questions that staff would be asking.

The NIAS staff made recontact phone calls from mid-May through September. These additional recontact calls were required due to the late arrival of data from some states. Based upon our telephone communications with the states, we were also able to expand the data reported to fill in many of the gaps. This occurred either through the use of an estimation algorithm suggested or agreed upon by the state or by obtaining actual data over the phone. Clarification of questions and the acquisition of additional data improved the general quality of all the reported data, providing NIAS with a solid data base and thereby enhancing the value of the resulting data analysis.

### Handling of Outliers

The preceding discussion details the preliminary data editing activities which were undertaken prior to beginning the data analysis phase. Unfortunately, a visual inspection of the data can never identify all questionable responses. This is especially true when the analysis involves the development of ratio indicators. Therefore, a second phase of data editing invariably occurs simultaneously with the initial stages of data analysis when the presence of questionable data becomes more apparent. Questionable data elements are frequently referred to as potential "outliers", and the following discussion details our treatment of these data elements.

Handling of the outlier problem can be partitioned into two parts - identification and treatment. Identification of outliers can be made either using a statistical decision rule (such as examining all data points which are outside two standard deviations from the mean) or through visual inspection. In general, we



chose to take the more informal (visual inspection of the data approach) because the statistical method is far too rigid for the small sample sizes involved. This approach essentially examines each data element for reasonableness. This examination was based upon a comparison of each state's data to other states, and a comparison across functional areas of data within each state.

In general, a somewhat liberal acceptance of questionable data was tolerated because, discarding data on the basis of comparison to other data which are also potentially questionable, would contradict the investigative nature of this effort.

This identification of outlier process was undertaken both on the "level"<sup>1/</sup> data and on the various ratios derived from the level data. In reality, there was considerable interaction between the ratio and level data. For example, when it was obvious that a state's proportion of functional area #1 (General Administration) was markedly different either from other states or, in some instances, from the previous year's data, this triggered an examination into the reasonableness of the numerator and denominator (level) data. This examination yielded a decision as to which data element in the proportion was questionable (if not both). If one of the level data elements was determined to be an "outlier," then associated ratios were likewise dropped from the analysis.

When examining the sample sizes associated with the various averages, the reader will note that the sample size changes considerably depending upon the data elements being analyzed. For example, costs by each of the major functional areas are available for the vast majority of respondents. However, cost per claim by type of claim is only available for eight states because it involved much more disaggregated data which most states could not provide. This is because our outlier analysis was performed at

---

<sup>1/</sup> Level data is a term used to denote totals as opposed to ratios or proportions.



each level of aggregation analyzed. Therefore, the fact that a state reported questionable data in one subfunctional area did not disqualify their data from use when analyzing another subfunctional area. For example, the fact that a state reports an inordinate proportion of costs in General Administration does not disqualify that state from analysis in other areas, where its data appeared reasonable. The advantage of this approach is that it takes maximum advantage of the data reported to us. This approach is valid in most instances because it is generally apparent when a state has good data in one cost area, but not in another area.

This process of identifying and deleting questionable data elements was applied to the data set analyzed in Chapter IV. The following chapter contains recommendations for improving the subsequent data collection effort based on lessons learned during this round.



### III. RESULTS OF REPORTING TEST

A major purpose of the Administrative Cost Study was the test of the states' ability to respond to the data request. The study's methodology provided multiple opportunities for respondent feedback. Through the many contacts with the states, NIAS has learned about the problems encountered by the Medicaid Directors and other state personnel when confronted with the study's extensive data requests. The following sections discuss the results of the test, analyze the problems identified and present recommendations for improvements that are necessary if this type of data collection is to be integrated into the current and ongoing financial reporting system.

#### TEST RESULTS: RESPONSE RATE, ACCURACY OF DATA, RESPONDENT BURDEN

When considering the results of the prototype test two factors must be examined: (1) the response rate, which indicates the gross ability and/or willingness of states to respond and (2) the thoroughness of the data submitted, which indicates the ability of individual states to supply specific information on administrative cost, staffing and workload.

#### Response Rate

From a universe of fifty-three (53) Medicaid jurisdictions, we received a total of twenty-nine (29) responses. Twenty-five of these responses were judged complete enough for inclusion in some part of our data analysis. Therefore, our study achieved roughly a fifty percent response rate. Several factors should be considered before one judges the degree of success of this effort.

First, the fact that the survey was handled through the mail places certain inherent limitations on the response rate. Face





to face contact with a respondent is a foolproof method of guaranteeing a high rate of response. However, resource limitations and time limitations precluded this approach. Second, a major purpose of this contract was to test the voluntary compliance to a reporting system which utilizes the mail.

When examining the set of respondents in terms of their importance to expenditures on total Medicaid administrative costs, we note that the two largest states (New York and California) did not respond. However, when size is defined in terms of the dollar volume of medical vendor payments, five of the ten largest and twelve of the top twenty states did respond.<sup>1/</sup> This implies that our set of responding states is fairly representative of the universe of Medicaid jurisdictions.

The cost matrix and the workload reports required information at a level and in a fashion that states had not previously reported. The distribution of administrative costs to the twelve functional areas, and the detailed accounting of the workload, went beyond any administrative data request previously seen by the states. The functional areas include all the activities encompassed in the administration of the Medicaid program but in a pattern or a terminology that in most cases did not correspond to the accounting systems of the states. In other words, states do retain the information requested but not necessarily in a form that could easily be transcribed onto the matrix. Since many functions cut across organizations, aggregating costs for some areas was very difficult despite the definitions and rules which were given to the states. For example, in many states quality control workers review cases for AFDC and Medicaid. For this study the Medicaid share of the eligibility determination cost was allocated according to the state's AFDC/Medicaid allocation formula but only for the eligibility component. Third-party liability or claims processing components of quality control could not be shared with AFDC and therefore required a reporting of actual cost. "Best guesses" were sometimes the only means by which states could supply these data. In addition, many organizational units had responsibilities for multiple functions. These units had the difficult task of dividing their

---

<sup>1/</sup> For a list of the states which did respond, see page 21.



administrative expenditures in a manner beyond that available in their own record keeping.

The Other Workload Data requests presented similar problems and several unique ones. As an example, a claim was defined for this study as "any individual line item for which reimbursement is being sought". This definition is consistent with that of the Medicaid Minimum Data Set to be implemented in January, 1980. Some states define a claim as a piece of paper that has several items for which reimbursement is being sought, but which they have counted as only one claim. These states were asked to use our "reimbursable line item" definition of a claim for purposes of this study. As a result, only fourteen states reported any S/UR data, and of these only ten states provided enough cost and line item workload data to actually calculate cost per line item for the various types of claims. The other four states either could not convert their claim definition to line items or could not provide an essential element of cost to derive total claims processing costs.

In summary, a voluntary mailout survey with a response rate around fifty percent should, by most standards, be considered a success. The mandatory nature of a reporting system in which response is a requirement of participation in the Medicaid program should bring this up to 100%. Further, once states are aware that such reporting is required, and are familiar with the reporting categories, responding will be easier for them. Also, some consideration should be given to more intensive technical assistance to states which have county-based systems. This would ease the burden on them and ensure their participation in the reporting effort. Our recommendations in these areas constitute the final discussion area of this section, and are aimed at improving the next round of data collection.

#### Response Thoroughness

A good response rate, alone, would not indicate a successful test. Major gaps in the data submitted by the states would have



been nearly as damaging as a high non-response rate. As reported in the aforementioned Recontact Report, the thoroughness of the completion of the instruments varied. States, on the whole, did a better job completing the Cost Matrix than they did completing the Workload Data reports. A likely reason for this lies in the fact that the persons given responsibility for completing the survey package generally had accounting or financial management staff positions. Through recontact, the number of workload reports was significantly increased.

The cost matrices were also often submitted with data gaps. Many of these were closed during recontact and others were identified as areas in which no costs were incurred during the period of data collection. In total, the responding states did a respectable job in complying with a difficult data request.<sup>1/</sup> If this had been a required report, and not a study, and if the response rate and the thoroughness of the responses were the same, it would have been disappointing; but this was a study relying on voluntary responses and, therefore, the results warrant further development of this approach. Modifications to the data collection approach must address the problems states confronted during the test, as well as the problems encountered by HCFA/NIAS. An evaluation of the states' difficulties appears in the next section.

#### Evaluation of Reporting Problems

During the course of the study NIAS had frequent contacts with state Medicaid Administrations. Through these contacts a clear image of the problems confronting the states came into focus. There was the generic problem of translating costs, records and other data into the study format. Each state has its own accounting and budgeting systems, uses its own particular functional definitions and terminology, and does so at its own particular level of detail. In addition, the internal reporting of administrative expenditures at the county or local level in some states is such that it is impossible to discern spending by functional area. This situation is analogous to that which exists currently with the financial

---

<sup>1/</sup>For a detailed (by state and functional area) picture of response thoroughness see the table on page 59 and the related explanation of it on page 58.





reporting system between states and the Federal government. Beyond the problems posed by the very nature of the survey instrument, a variety of problem areas were identified. Five basic obstacles, 1) Lead Time, 2) Legislative Sessions, 3) Fiscal Agents, 4) Cost, and 5) Organization, dominated the picture. Each is discussed separately in terms of its impact on a state's ability to report data for this test and for future reporting requirements. We have arranged the discussion of problem areas in an approximate descending order of importance.

#### Cost of Responding to the Questionnaire

Many states, whether they reported costs, withdrew, or failed to respond, complained about the cost of their participation in the study. The detail and complexity of the data request required an extensive collection effort. State complaints relating to the massive efforts required for this study notwithstanding, maximum estimates of the level of effort needed to complete the matrix and workload reports were only 1.5 person months.

Participation in this study was an expense for the states. The functional areas as cost centers did not match closely to the states' cost centers which tended to be less specific; reconciling these differences required some effort. The data request encompassed several measures of both resource allocation and program output. If HCFA were to implement the prototype, the scope of the data requested could (partially on the basis of the experience gained from this study) be less extensive, thus reducing the cost. Furthermore, once states are set up to capture the reduced data request on a regular basis, the cost of collecting and reporting the data should drop. A substantial portion of the costs incurred by states during this test were of the start-up variety. In addition, since this was a one-time effort, many states did not consider the most effective long-term approaches for meeting the data request. As a result, many states approached the study as





an exercise to be completed and did not always sufficiently consider the alternative methods for collecting the data in terms of cost effectiveness. This behavior may be because states did not consider the likelihood of the cost matrix being a continuing data collection requirement.

#### Organizational Structure of Medicaid Administration

States whose Medicaid administration is partially delegated to the county level face a problem that programs administered wholly at the state level do not encounter. States that have a locally administered, state supervised Medicaid organizational arrangement have considerable difficulty in aggregating cost data for their programs. The problem in these states is that each local administration of the Medicaid program incurs costs in one or more of the functional areas and has workloads to report. In New York, for example, there are fifty-eight different county Medicaid administrations in addition to the state-level administration which oversees the entire program. For New York to collect all the data requested for this study, it would have required a survey effort by the counties of roughly the same magnitude as the entire study. The same is true for California; the state supervises the counties' administration of the Medicaid program and would have had to survey each county to establish the state's actual administrative cost. Neither state undertook this task.

If the prototype were to become a required report, a great deal of consideration will have to be given to overcoming this type of problem. These states already have reporting problems and any new requirements should be designed to alleviate those problems, not to aggregate them. HCFA may have to work with the single state agencies in addressing the issue of local reporting. Any discussion should be directed toward putting the state in a position of more easily satisfying Federal data requests or reporting requirements.

One should recognize that in most county administered programs only certain functions are carried out at the county level. One



approach to the problem might be periodic time and motion or work sampling studies to derive a formula for allocating the counties' administrative costs.

### Fiscal Agents

The use of a fiscal agent or multiple agents created a unique problem for some states. These states had to request information about their own program from their contractors. The fiscal agents of some states were quite helpful and provided useful information. Other states had difficulty securing data from their fiscal agents. The problems centered on the fiscal agents' contractual obligations. They felt that the data requests were outside of the agreement that they had with the states. Their rate structures did not include a factor for data requests of this type or form and they were unwilling to assume this cost. Further, they felt that since their contracts were awarded on a competitive basis, the disclosure of certain information about their operations would put them at a competitive disadvantage in the next contracting cycle. Fiscal agents have reporting requirements as part of their contracts. Any requests are provided at the discretion of the agent. Requests for study data do not usually fall within the context of the agreement between the agency and the fiscal agent.

Only one state cited fiscal agent problems as grounds for withdrawal, and that state was able to secure fiscal agent data with HCFA's assistance. Overall, fiscal agents did hinder a few states in their ability to provide complete data, but they did not create serious problems. If the prototype becomes a reporting requirement, states will have to specify in the contracts with their fiscal agents the data which will be needed. This may impact upon the costs of contracts in effect and should be taken into consideration. HCFA should consider working together with the states in presenting the data request to contractors.



## Legislative Session

The period for the collection of data occurred at a time when many state legislatures were in session. These states indicated that the data requests of their legislatures were of higher priority than the Cost Study data request. If the limited staff time available was not sufficient to fill both data requests, the Cost Study would be put aside or dropped. Three states cited this problem as part of their reason for withdrawing from the study. Many more saw it as a significant problem which they subsequently overcame.

Legislative sessions are certainly a reporting hindrance to a special, one-time study as detailed as this one. Important programmatic decisions are based on the information provided to the legislature. Assigning legislative data requests a higher priority than the Cost Study was reasonable. It may not, however, constitute grounds for withdrawing or failing to provide any cost data whatsoever.

Conceivably, data generated from this detailed system of administrative cost reporting could be useful to Medicaid agencies in their relationships with legislative and executive branches. A state legislature might even be interested in reviewing Cost Study data on a regular basis. Additionally, the extended reporting deadline should have provided some relief to states facing conflicting time-limited requests. It is possible that a state might have decided against participation in the study before announcement of the deadline extension. It also appeared that a few states gave the study little consideration from the outset.

If this prototype reporting system should become part of Medicaid's ongoing reporting requirements, some consideration should be given to the position of the state administrations during periods of peak information demands. However, continuous real-time (as opposed to after the fact) data capture and regular (i.e. predictable) reporting intervals should permit states to accommodate both administrative cost reporting and legislative requests.





## Lead Time

Medicaid Directors and their representatives present at the October 10, 1978 discussion of the Cost Study strongly endorsed the idea of giving each state the opportunity to review the data request prior to the collection period. It was reasoned that the lead time would allow the states to prepare in advance for the collection effort. For example, some states used time to establish sampling procedures they felt were necessary to supply data that would have to be estimated. The lead time suggestion was accepted and the data collection period was changed to the first quarter of calendar year 1979. The instrument was mailed to the Medicaid Directors on November 30th. This mailing referred to the NIAS "How To" manual which followed under separate cover. The mailing of the manual occurred on the 26th of December.

The second mailing did not arrive in most states until the first week of January. During the initial contacts this point was often raised as an objection to the study. State staff complained that adequate time to prepare had not been provided. On the other hand, states did little with the lead time they had and it would appear that many states gave the voluntary study a low priority and thus were ill-prepared to collect the data in any case. However, the extension of the reporting deadline to June 30th did provide states with some time to offset the handicap resulting from diminished lead time. NIAS continued to assist states after the extended deadline and received data as late as September, 1979.

The following section discusses recommendations that could improve the response rate and the quality of the data for future reporting of Medicaid administrative cost data.

## RECOMMENDATIONS FOR SUBSEQUENT DATA COLLECTION EFFORTS

If HCFA moves forward with plans to collect detailed cost and workload data on a regular basis, a number of modifications of the previous strategy should be considered to facilitate this effort. These modifications center around changes in the data collection





instrument, provision of assistance and development of a source document. Two areas of procedural recommendations center around the ideas of obtaining a stronger mandate for the report submission and changing the reporting period to one less onerous to the states. Each of these points is discussed in detail in the following pages. We have attempted to separate the topics into logically independent areas. However, upon implementation, there will no doubt be some overlap.

#### Modify the Data Collection Instrument

NIAS recommends that a close review of the data collection instruments be undertaken to identify the critically needed data elements vis-a-vis those which are not absolutely necessary and entail a real burden on the respondents. This review should recognize the inverse relation between information requested and specific or generalized refusal to respond.<sup>1/</sup> Any modification of the instrument should also recognize that about half of the states have revealed that they can conform to the current set of twelve functional areas of the cost matrix. In addition, any attempt to further adapt the cost matrix to any specific accounting system should recognize that this change may make it more difficult for other states to respond. Hence, the goal in refining the cost matrix should be the development of an instrument to which each state can relate and which would result in a comparable burden for each state in terms of relating the instrument to current reporting system. With these general points in mind,

---

<sup>1/</sup> "Specific" in the sense that they do not submit that particular element. "Generalized" in the sense that at some point, they look at the total instrument and judge that it is too large to attempt any response.



For states which depend on significant administrative contributions from the counties, an additional effort would be required. This effort would involve a site visit to each county agency to interview a key staff person to determine number of personnel, salaries, overhead costs, etc., for the functions administered at the county level. This effort would probably involve a professional person spending a day in each county agency. A disadvantage of this approach lies in the expanded workload burden on HCFA with the extent of this burden remaining somewhat unknown until well into the data collection phase.



we suggest that some reduction in the number of sub-functional area disaggregations be considered. There are three major functional areas in which the state is asked to provide two lower levels of disaggregation of the cost data. These functional areas are: 3. Beneficiary Services, 5. EPSDT, and 7. Claims Processing.

For Beneficiary Services, the second order disaggregation is only within one subfunctional area (i.e., Row A - Eligibility Determination). The Cost Matrix asks the state to breakout its costs by eligibility category -- (1) Aged/blind/disabled; (2) Other categorically needy; and (3) Medically needy. These are functions which should relate to clearly identifiable activities in all the states and which also have analytical value to HCFA. Therefore, they should be retained even though states had difficulty submitting these data.

However, the second order disaggregations for functional areas 5 and 7 should probably be greatly reduced or eliminated. The row titles for these two functional areas appear below:

5. EPSDT

- A. Informing and Notification
  - (1) Automated
  - (2) Manual

- C. Case Management/Follow-Up
  - (1) Automated
  - (2) Manual

- B. Outreach

- D. General EPSDT Admin.

7. Claims Processing

- A. Developmental Costs

- B. Operating Costs

- 1. In-House:
  - a) hardware (devel. share)
  - b) software development
  - c) site prep. and other...
  - d) info. systems planning
- 2. Contracted:
  - a) hardware (devel. share)
  - b) software development
  - c) site prep. and other...
  - d) info. systems planning

- 1. In-House:
  - a) hardware (operating)
  - b) maintenance software
  - c) data entry
  - d) computer operations
  - e) manual claims processing
- 2. Contracted:
  - a) hardware
  - b) maintenance software
  - c) data entry
  - d) computer operations
  - e) manual claims processing



Judging by the response rate to these two areas, states had a very difficult time reporting these data. Only five of the twenty-three respondents with usable data reported any second order disaggregated data in functional area five (EPSDT) and only eleven states reported any second order disaggregated data in functional area seven (Claims Processing). Second, those states which did respond with data at this level generally reported less than one-fourth of the data elements requested.

We recognize that data on the activities reflected by these sub-functional areas are important for HCFA program management functions, but we are pessimistic about the potential accuracy and response thoroughness of these data when collected by mail. It is possible that, when specific policy questions surface which require these data, their collection may necessitate a more intensive effort such as the site assistance recommended in the following pages. Therefore, the wisdom of retaining these second order disaggregations would appear to be highly dependent upon the collection mode used in the next round.

A second area of reduction in data elements requested concerns the categorization of functional area costs by type. The existing instrument costs are to be categorized into one of six types: Salary, Fringe, Other Direct-Facility-Related, Other Direct-Non-Facility-Related, Indirect-Facility-Related and Indirect-Non-Facility-Related. The categorization between "facility" and "non-facility" for both direct and indirect costs is one of record keeping rather than the inherent nature of the items consumed.

The implication of the preceding discussion is a significant decrease in raw data elements requested with, in our opinion, only a minor loss of value in the total information reported. The reduction from 82 to 60 rows and from seven to five columns<sup>1/</sup> decreases the number of raw data cells from 574 to 300. This is a significant reduction in respondent burden with only a minor

---

<sup>1/</sup>Note that we are referring here to columns of original data rather than those columns which are the result of additions of original data.





loss of usable information to HCFA. In addition, this loss of information should be viewed within the context that we experienced poor reporting of these data (in terms of both accuracy and response rates) in the first place.

#### Initiate the Use of a Raw Data Source Document

Regardless of the mode for collecting the next round of Cost Matrix and Other Workload data, a system of compiling the essential raw data prior to entry on the Cost Matrix should be initiated. Since the most critical raw data required in the Cost Matrix is personnel full-time equivalents, and concomitant personnel costs, the raw data source document should be designed to collect the distribution of each employee's time in each of the functional and sub-functional areas.

The following chart is an example of a source document which would be collected from each of the state's Medicaid administrative sections. This sheet would be circulated through each section at the end of a reporting period or prior to the beginning of a new reporting period of pre-specified length. Our recommendation on whether the data are best collected prospectively or retrospectively is that, if a reporting period of a month or less is covered, the data are best collected retrospectively. We recommend the retrospective approach because the data will be accurate in terms of employee time actually spent in particular functional areas. A prospective data collection would be accurate in terms of planned expenditures, but there is the large probability that demands placed on the staff during the period will divert staff time away from the projected commitment. This would probably exceed the "failure to recall" error of the retrospective method.

The employees would complete only one of these forms per reporting period even though they may work in two or more different sections where the form is circulated. The section where they have spent the preponderance of time determines in which section they complete the form. The choice of reporting period length may not necessarily correspond to that required by HCFA for the Cost Matrix, but it may be of shorter duration.



PERIOD COVERED: FROM TO

146026

**PERIOD COVERED:**

## SECTION:

**PAGE** **OF**

**PREPARED BY:**



The heading of the form asks for information on the dates covered by the form, section name (which may not correspond to a functional area name on our Cost Matrix), total work hours and total holiday hours for the period covered. This information would be entered on the form before it is circulated for ease of response by each employee. One form (a single sheet) could be used for 5-10 employees.

The body of the form asks employees to distribute the total work hours between work in one of five functional areas, work in "non-Medicaid" functional areas, holiday, vacation and sick leave. There are places to record an employee identification number and initials. The value of this identification lies in preventing more than one submission per employee, and in being able to merge the FTE data with information on salaries, wages and fringe benefits from the personnel department. The form would be designed with fixed fields for ease of keypunching and submission to a data processing facility.

The functional area fields could be five columns wide to allow for distribution to the lowest level (e.g. 07A1C, Claims Processing, Developmental Costs, In-House, Site Preparation and Other). A copy of the Cost Matrix would be available for employee reference to ensure that they enter the correct functional and sub-functional area codes. Extra rows could be used by an employee for time spent that was not at the same pay rate as regular work time. This time would be signified by the use of another row and an annotation in the explanation field. There is a block at the bottom for review by the supervisor of the section in which that form is circulated.

These forms would be collected and forwarded to the person responsible for submitting the Cost Matrix to HCFA, and that person would have the data on hours worked transformed into



personnel cost by functional area. These data (FTE's personnel cost and fringe benefits cost) would then be ready for recording on the Cost Matrix.





## Provide Technical Assistance for Data Collection

The recommendations in this section suggest ways to increase the understanding of the respondents regarding the data requested and to ensure a better response rate. Better understanding of the information required on the part of the responding states is a prerequisite to more accurate data, and a larger response rate is imperative if an accurate picture of the national Medicaid administrative scene is to be achieved. As one vehicle for achieving a greater response rate, we recommend some form of on-site technical assistance or data collection. The following discussion presents several recommendations to improve the accuracy and response rate of the next data collection round. This discussion is not intended to be an exhaustive presentation of all the alternatives, and, indeed, there are numerous combinations of the various parts within each recommendation.<sup>1/</sup> However, it should provide a solid basis for discussions on improving the current strategy.

## Mail Survey with Site Visits for Data Validation

This strategy combines the currently used mail survey method with site visits to some or all states to verify certain critical data. One way to achieve a better understanding of the accuracy involved in the data submitted in the next round is to perform a limited on-site data validation study. This study would allow recording both qualitative impressions or the interviewer regarding the adequacy of the source documents used to develop the data entries and actual independent derivation of selected data elements. Error rate statistics (e.g. mean absolute error rates) could then be developed on these data elements as an indication of reporting accuracy for the entire state's data submission.

---

<sup>1/</sup>This set of recommendations also represents a considerable range in cost/effort for HCFA.



Unfortunately, as in this study, the tendency for states not to participate is not offset by a strong effort to relieve the states of the additional reporting burden. Therefore this effort alone can not be expected to dramatically increase the response rate.

#### Mail Survey to Responding States with Site Visits to Non-Respondents

This approach combines the current method of collecting mail survey data with on-site data collection for states which find responding themselves too burdensome on in-house staff. Two of the states most likely to require on-site assistance are New York and California because they both have some county-based Medicaid administrative functions. For those states with county-based Medicaid administrative functions, data collection efforts may also be necessary at the county level. This combination of data collection modes would implicitly allow states to choose whether to submit the data themselves or simply to provide the HCFA team with access to the appropriate source documents.

The composition of the HCFA site visit team would vary depending upon the structure of the state Medicaid administration. For states with a centralized Medicaid administration, we estimate (from the basis of our experience on the 1978 six-state study) that a team of two professionals would require approximately 1½ to 2 weeks per state.<sup>1/</sup> This team would be composed of an experienced analyst with knowledge of Medicaid accounting systems and an experienced research assistant who is able to examine and abstract data from source documents. Before the visit, this team would undertake a brief study of that particular state's Medicaid organization and the potential problems with translating cost and workload data from their organizational structure onto the HCFA instruments. In addition, coordination with each state prior to the visit would ensure that source documents and the staff who maintain them are available for assistance during the site visit.

---

<sup>1/</sup> New York and California may require more time on site.



For states which depend on significant administrative contributions from the counties, an additional effort would be required. This effort would involve a site visit to each county agency to interview a key staff person to determine number of personnel, salaries, overhead costs, etc., for the functions administered at the county level. This effort would probably involve a professional person spending a day in each county agency. A disadvantage of this approach lies in the expanded workload burden on HCFA with the extent of this burden remaining somewhat unknown until well into the data collection phase.



## Merge Data from Current Study with Site Visit Data to Non-Respondents

One possibility for "rounding-out" the current data set is to augment it with site visit data from the non-respondent states. This approach could be used if HCFA does not permanently emplace the reporting system on a regular reporting basis. In this case the current data set could be merged with data collected from team site visits to yield a complete cross-sectional data set which would be suitable for further analysis of administrative costs, workload and projections of national aggregates in the future. The site visit teams could be organized similar to those discussed in the preceding section. One obvious advantage to this approach is that it provides a one-time picture of Medicaid administration while minimizing respondent burden by ignoring the previous respondents and assisting the non-respondents.

There are some obvious disadvantages to this approach of which two somewhat technical problems relate to difficulties in making data from two time periods and collected via two different modes (mail and site visits) comparable. The time adjustment problem reflects the fact that cost data collected for two different points in time are not comparable because of the inflation process which has occurred in the interim. One partial solution to this is to adjust the two different data series to be comparable through the use of an appropriate inflation index. In the case of the current data, a general GNP deflator, consumer price index (CPI), or an appropriately developed composite index could be used to make the two data series compatible. This latter composite index would be developed by combining labor and other cost expenditures in the same proportions as the states have indicated in their break-out of personnel costs versus other cost categories. The difficulty with this solution is that increases in Medicaid administrative costs cannot be assumed to coincide precisely with any general price index.

The second difficulty involves comparability between data collected by site visits and mail survey. This problem can not be totally overcome because the fact that there is more variation





in interpretation when data is submitted by the individual state staffs compared to a single team from HCFA. However, we feel that this "non-comparability" between the two data sets can be minimized by a more precise version of the training manual which is discussed in the next few pages.

#### Provide Training Assistance to the States

Another form of technical assistance which would improve the next data collection cycle involves the provision of training by a HCFA team visit to the Medicaid agencies. This training would be oriented toward those staff actually responsible for compiling the raw data source documents and translating this information into the data required by the HCFA instruments. Training materials would be developed prior to the site visit phase to allow the team to elicit participation by the staff in a workshop atmosphere. The basis for developing the training materials could be the current "Manual" for completing the instruments expanded in the following areas:

- Clarification of the definition/ composition of functional areas to address specific problem areas revealed in the present study.
- Information regarding translating that specific state's organizational structure to the HCFA instrument.
- Suggestions for techniques to estimate data which is not readily available.
- The use of data source documents for completing the Cost Matrix.

Because of the first two topics above, the manual should be a flexible document (perhaps in loose-leaf) tailored somewhat to the individual states.



The composition of the training teams could probably be confined to two persons--an experienced analyst capable of answering the more technical questions and a research assistant who could aid in the presentation. We estimate that each session would involve three consecutive days of which the first day would be an informal familiarization process where the team meets with supervisory staff to establish rapport.

The training should be presented before the onset of the reporting period to ensure that the necessary source documents are put in place, that states are comfortable with the allocation process, and that all concerned understand how the various documents are to be completed. In addition, for states with county-based systems, the influence of several well-trained staff at the state level may offset the span of control problem with respect to the counties.

#### Provide Optional Processing of Data to the States

The actual mechanics of translating the employee hours by functional area from the new source document into the cost matrix is a tedious and time consuming task. In our opinion, this task could be optimally performed using a computer. The use of the computer would considerably reduce the burden on the individual states and thereby enhance the response rate. In the two studies on Medicaid administrative costs which NIAS has performed, it is apparent that the preponderance of effort required to prepare the analysis of a state's administrative cost data involves the translation of employee hours by functional area data into that cost matrix. Several states which did not respond with a completed cost matrix were able to provide extensive information on personnel and costs incurred which related to their particular organizational structure. While we have argued previously that it is impossible to design a cost matrix which accommodates all of the state organizations, one way to reduce the overall burden is to provide the technical support to decrease their burden by helping them with the translation of source document data into the cost matrix.



As suggested earlier, state employees involved in the administration of the Medicaid Program would periodically (e.g. weekly, bi-weekly, monthly, etc.) report time spent in each of the functional areas. The new source document "Employee Hours By Functional Area" (set forth on page 39 of this report) could be used for this purpose. The number of hours spent in each Medicaid functional area, as well as any time spent on non-Medicaid projects and any time off, would be coded on this document for each employee in each section of the administrative organization. The completed source documents would be forwarded to a central coordinator, who would monitor receipt and store them until the end of the quarter.

When the completed source documents have been received, the central coordinator would summarize the quarterly data for each employee, using the "Employee Hours By Functional Area" document which follows. The employee's name, identification number, and section would be entered at the top of this form. The number(s) of each of the functional area(s) in which the employee worked would be entered in the column headings. For each source document from the section during the quarter, the date of the source document and the hours worked by functional area, time off, non-Medicaid hours and total hours would be transcribed from the source document to the summary document. After all data during the quarter for this employee has been transcribed to the summary document, the hours in each column would be added and the total entered on the bottom line of the particular column. After all column totals have been calculated, the totals for each functional area, time-off, and non-Medicaid columns should be added and compared to the entries in the "TOTAL HOURS" column to be sure that an error has not been made.

With the summary document completed, the totals for the employee should be transcribed to the data input form (see page 52). The section number, employee identification number, employee name and the total hours would be entered on the left side of the form. The employee's salary for the quarter would be obtained from the payroll department (or other source) and entered on the data



### EMPLOYEE HOURS BY FUNCTIONAL AREA

SECTION NAME \_\_\_\_\_

EMPLOYEE NAME \_\_\_\_\_

SECTION NUMBER \_\_\_\_\_

EMPLOYEE NUMBER \_\_\_\_\_

PERIOD	MEDICAID HOURS					NON-MEDICAID HOURS	PAID TIME OFF HOURS	TOTAL HOURS
	FUNC. AREA _____	FUNC. AREA _____	FUNC. AREA _____	FUNC. AREA _____	FUNC. AREA _____			
TOTAL								





input form. For each functional area in which the employee worked, the functional area number and total hours worked in that function would be entered on the right side of the form. An unlimited number of functional area entries can be made by using separate rows for each.

After the data input forms have been completed, they will be forwarded for data processing. This data processing could be performed at a central facility (e.g. at HCFA in Baltimore) or on-site in the state (using an on-line computer terminal).

After the data has been entered, it would be processed through an edit routine. Among the conditions which should be tested are:

- Valid employee identification number format;
- Valid section number format;
- Reasonable salary amount (i.e. not greater than a specified limit);
- Presence of at least one functional area entry;
- Valid function number;
- Presence of total hours entry; and
- Comparison of sum of functional area hours to total hours.

Any errors discovered by the edit routine should be researched and corrected. After elimination of all errors, a proof-list of the data for each employee in a given section would be produced (see example on page 54 ). At the end of the proof list, the total salaries for each functional area would be listed for that section, together with the number of Full-Time Equivalent (FTE) employees for each area. For each employee, the FTE equivalent for a functional area is:

$$\text{Functional Area FTE} = \frac{\text{Functional Area Hours}}{\text{Standard Hours For the Quarter}}$$



## DATA INPUT FORM

[illegible][illegible]



## DATA INPUT FORM

[illegible][illegible]



The proof list for each section would be forwarded to the state for approval of the reasonableness of the distribution. If the state found that any of the output appeared unreasonable, they would be permitted to change any input data that was in error. After the proof lists for all sections are approved, the cost matrix for personnel costs would be produced.

This process of translating from the source document to the cost matrix is, realistically, an iterative one in the sense that initial results will be fed back to the states for clarification. The objective of this process would not be to allow states to change their submissions merely to enhance their image, but rather to reduce assignment errors. Using this approach will allow HCFA to perform their data editing simultaneously with their data collection. The use of this process will eliminate the need for an extensive call back effort to verify data after the cost matrix has been produced.

The preparation of the DATA INPUT FORM could be mechanized by using the source document for input purposes. The costs of entering data each time a set of source documents is prepared must be compared to the benefits obtained by eliminating the manual preparation of the summary document by the state.

In addition to allocating personnel costs, other costs could also be entered into the data base, using similar techniques. Costs could be allocated to specific cells of the cost matrix. In addition, algorithms could be developed to allocate certain costs (e.g. rent) using the number of FTEs or total salaries of a section, or of the organization in total, as described. Using this concept, the amount of effort required for the state to produce the cost matrix would be significantly reduced.





# MEDICAID ADMINISTRATIVE COSTS ANALYSIS

## PROOF LIST OF PERSONNEL DATA

STATE: \_\_\_\_\_

SECTION: \_\_\_\_\_

EMP NO.	EMPLOYEE NAME	SALARY	FUNCTION NO.	NAME	HOURS
1234.1	SMITH J.	\$ 5,500	1.03	General Admin.	300
			1.04	EDP Development	50
			9.98	Paid Time Off	75
			9.98	Non-Medicaid	75
				TOTAL	500**
2234.1	DOE J.	\$10,000	1.03	General Admin.	450
			9.99	Non-Medicaid	50
				TOTAL	500**
3123.1	BROWN J.	\$ 7,000	1.03	General Admin.	500
				TOTAL	500**
3222.1	JONES W.	\$ 2,500	2.01	Recipient Enroll- ment	200
			2.00	Recipient Q.C.	200
				TOTAL	400

### SUMMARY

NUMBER	NAME	TOTAL FTE	TOTAL SALARY
1.03	General Admin.	2.50	\$19,300
1.04	EDP Develop	.10	550
2.01	Recipient Enrollment	.40	1,250
2.02	Recipient QC	.40	1,250
9.98	Paid time off	.15	825
9.99	Non-Medicaid	.25	1,825
	TOTAL	<u>3.80</u>	<u>\$25,000</u>



## SUMMARY

The preceding discussion suggested several modes of technical assistance to the states which are designed to enhance their understanding of the reporting requirements, and reduce the reporting burden of their respective staffs. Each of the recommendations has inherent strengths and weaknesses, and the optimal strategy may involve an imaginative combination of these approaches.



## CHAPTER IV

### ANALYSIS OF MEDICAID ADMINISTRATIVE COST AND STAFFING DATA

#### A. INTRODUCTION

The purpose of this chapter is to present an analysis of the cost and staffing, and workload data collected on the "Medicaid Administrative Cost Matrix", the "Claims Processing Recap Schedule" and the "Surveillance and Utilization Review Workload" forms. We have attempted to include a mix of both descriptive and causal analyses. This analysis applies to the twenty-five states where enough data were obtained to justify their inclusion in our data base. Four states were deleted prior to any preliminary analyses because their data submission was not complete enough to warrant consideration. In addition, two states (Ohio and Illinois) reported some data which appeared credible, but they were unable to disaggregate a large amount of "Other Administrative Costs" (Subfunctional area 1F). Therefore, these two states are omitted from analysis of several functional areas. Descriptive information is presented on both an individual state level and in the aggregate for the twenty-five states. The actual data collection instruments appear in Appendix A. As the reader can see by examining these data collection instruments, there are large numbers of analyses which can be performed on these data. The analyses included here are not intended to be exhaustive, in any sense. They represent the author's best judgement of analytic approaches dictated by the project's stated objectives. In addition, we have attempted to include most of the descriptive approaches used in NIAS' previous six-state analysis of Medicaid Administrative Costs. A reader with a particular analytic interest not covered here may wish to consult the data and perform other analyses.



The organization of this chapter is such that it progresses, within major topic areas, from descriptive analyses of the data to more elaborate attempts to examine the reasons behind variations in the data. The major topic areas which we analyze are listed below:

- Part B. Discussion of Data Submitted
- Part C. Costs: total
- Part D. Costs: by state
- Part E. Costs: by function and subfunction
- Part F. Costs: by type
- Part G. Manpower/FTE's
- Part H. Other Indicators
- Part I. Special Analyses: workload, output,  
unit cost of claims processing
- Part J. Conclusions

## B. DISCUSSION OF DATA SUBMITTED

The responding states provided a varying amount of the data requested on the survey forms. Over 935 separate data items were requested. Most of the data covered administrative costs (i.e. cash basis expenditures) and administrative staff quantities (i.e. full-time equivalent personnel) distributed over 12 major Medicaid functions. States were requested to allocate the first calendar quarter expenditures for administration over the following functions:

1. General Administration
2. Training
3. Beneficiary Services
4. Quality Control
5. Early and Periodic Screening, Diagnosis and Treatment (EPSDT)
6. Provider Services
7. Claims Processing
8. Surveillance and Utilization Review
9. Payment Recovery
10. Fraud Control
11. Institutional Reimbursement
12. Non-Institutional Reimbursement





In addition, states were asked to provide indications of the volumes of administrative outputs for the same period. In this case the outputs to be measured were: claims processed (by type of claim, regardless of processor/in-house or contractor), S/UR claims undergoing prior authorization, prepayment, and/or post-payment reviews, and eligibility workloads (i.e. number of determinations of eligibility by type of recipient condition, and the number of eligibility redeterminations). The data request consisted of the following:

- Cost Data - 656 data items
- Staff Data - 82 data items
- Claims Processing - 154 data items
- S/UR workloads - 39 data items
- Eligibility workloads - 4 data items.

The jurisdictions used in this initial analysis of the data are as follows: Alabama, Alaska, Arkansas, District of Columbia, Colorado, Connecticut, Florida, Georgia, Idaho, Illinois, Iowa, Maryland, Louisiana, Massachusetts, New Hampshire, New Jersey, North Carolina, Ohio, Pennsylvania, Puerto Rico, South Carolina, Tennessee, Virginia, West Virginia and Wyoming.

A more detailed understanding of the reporting experience of the twenty-five states analyzed in this section can be gained by examining Table B-1. This table shows, for each state's twelve functional areas, whether that state reported costs (C), personnel by full-time equivalent (F) and whether they were able to distribute their costs by sub-functional area (B). In instances where we asked for costs to be broken down into two lower levels of disaggregation (i.e. functional areas 3, 5, and 7), the states which submitted this data are shown with a "double-B" (BB). As one notices by examining the table, some states reported virtually all data requested, while others reported only a fraction of the requested data. Likewise, looking down each column one notices some patterns in terms of reporting on each functional area which may be related to a common difficulty in obtaining or estimating these data. The reader should keep in mind this large variation in data reported by functional area while reading the ensuing analyses and notice the large variations in sample sizes.



TABLE B - 1

DATA REPORTED BY FUNCTIONAL AREA BY STATE

States	General Administration	Training	Beneficiary Services	Quality Control	Provider Services	Claims Processing	S/DR	Payment Recovery	Fraud Control	Institutional Reimbursement	Non-Institutional Reimbursement
Alabama	CFB	CF	CF BB	CFB	CFB	CB	CFB	CFB		CFB	2/
Alaska	CFB	C	CB	CFB	CB	CF BB	CFB	CFB	CB	CFB	
Arkansas	CFB		CFB	CFB	CFB	CF BB	CFB		CFB	CB	
Colorado	CFB	CF	CF BB	CFB	CFB	CF BB	CFB	CFB	CFB	CFB	CF
Connecticut	CFB	C	CF BB	CF B	CF BB	CFB	CFB	CFB	CB	CFB	
Dist. of Columbia	CF		CF BB	CF	CFB	CFB	CFB	CFB			
Florida	CFB	CF	CF BB	CF	CFB	CF BB	CFB	CFB	CFB	CFB	CF
Georgia	CFB	CF	CF BB	CFB	CFB	CF BB	CFB	CFB	CFB	CFB	CF
Idaho	CFB		CFB	CFB	CFB	C B	CFB	CF	CFB	CFB	
Illinois 1/	(CF)	(CF)		(CF)	(CFB)	(CFB)		(CFB)			
Iowa	CFB	CF	CFB	CFB	CFB	CB	CFB	CFB		CFB	CF
Louisiana	CB	C	C BB	C B	C B	C B	C B	C B		CB	
Maryland	CF	CF	CF	CF	CF	CFBB	CFB	CF	CF	CF	CF
Massachusetts	CFB	CF	CFBB	CFB	CFB	CB	CFB		CFB	CB	
New Hampshire	CFB	CF	CFBB	CFB	CFB	CFBB	CFB	CFB	CFB	CFB	
New Jersey	CFB		C B	CFB	CF BB	CB	CFB	CFB	CFB	CFB	
North Carolina	CFB	CB	C B	CF	CF	CB	CF	CFB	CF	CFB	
Ohio 1/	(CF)	(C)	(CF)	(CF)	(C)	(C)	(C)	(CB)		(C)	
Pennsylvania	CB	C	C BB	CB	CB	CB	CFB	C B	CB	CB	
Puerto Rico	CFB	C	CF BB	CF	CF	CFB	CFB				
South Carolina	CFB	C	CFB	CFB	CFB	CB	CFB	CFB	CFB	CFB	
Tennessee	CFB	CF	CFBB	CFB	CFB	CFBB	CFB	CFB	CFB	CB	C
Virginia	CFB		CB	CFB	CFB	CFBB	CFB	CFB	CF	CFB	
West Virginia	CFB	C	CFB	CFB	CFB	CFBB	CFB	CFB		CFB	CF
Wyoming	CFB		CF BB	CFB	CFB	CFB	CFB	CFB	CFB	CFB	CF

1/ As noted on page 56, there were problems associated with Illinois and Ohio.

2/ No subfunctions under these areas

3/ Subfunctions disaggregated into additional levels of detail



### C. MEDICAID ADMINISTRATIVE COSTS: TOTAL

The first area of discussion concerns the total amount of Medicaid administrative costs incurred by the twenty-three states included in the analysis. Table C-1 shows how our sample of states reported their costs over the twelve functional areas.

A total of \$82,782,425 was expended for administration by the reporting states during the study period. Over half of that total was consumed by two functional areas. Claims processing accounted for 29.0% of all administrative costs, over \$24 million. This total was surpassed by the nearly \$28 million (34.3%) expended in the Beneficiary Services area. General Administration had a reported cost of \$6.7 million, 8.2% of the total administrative expenditure. As might be expected, Non-Institutional Reimbursement and Training were the two functional areas which had the smallest expenditure for the period with \$338,633 in costs reported for Non-Institutional Reimbursement, 0.4% of total costs, and \$694,811 were reported for Training, 0.8% of total costs. The only other area reporting costs in excess of 5% of total cost was Provider Services (10.5%). The remaining areas were all below 5%.

Graph C-1 shows each of the twelve functional areas as a percentage of the total administrative cost. Displaying the percentages in this way illustrates the relationship, in terms of costs, of the different areas. Table C-2 shows the average cost for each functional area computed for states that reported costs in the area. It also displays the unweighted percentage for each area. Graph C-2 shows these unweighted percentages to display the relative size of the expenditure in each functional area.

#### Comparison With Six-State Study

Comparing the results of the national study with the results of the six-state study is very difficult. Although each study was concerned with collecting data about Medicaid administrative costs, there were differences in definitions, functional areas, etc. which greatly diminished the possibility of direct comparison of the two studies. As an example, General Administration appears in both studies



TABLE C-1

## COSTS AND PERCENTAGES BY FUNCTIONAL AREA

FUNCTIONAL AREAS	Cost (\$)	Weighted Percentage
(1) General Administration	6,774,829	8.2
(2) Training	694,811	0.8
(3) Beneficiary Services	28,354,373	34.3
(4) Quality Control	2,109,200	2.5
(5) EPSDT	2,827,455	3.4
(6) Provider Services	8,730,742	10.5
(7) Claims Processing	24,027,399	29.0
(8) Surveillance and Utilization Review	4,146,846	5.0
(9) Payment Recovery	967,544	1.2
(10) Fraud Control	1,504,844	1.8
(11) Institutional Reimbursement	2,305,749	2.8
(12) Non-Institutional Reimbursement	338,633	0.4
TOTAL	82,782,425	99.9*

\*totals do not add  
due to rounding







GRAPH C-1

PERCENTAGES OF COSTS BY FUNCTIONAL AREA

Percentage

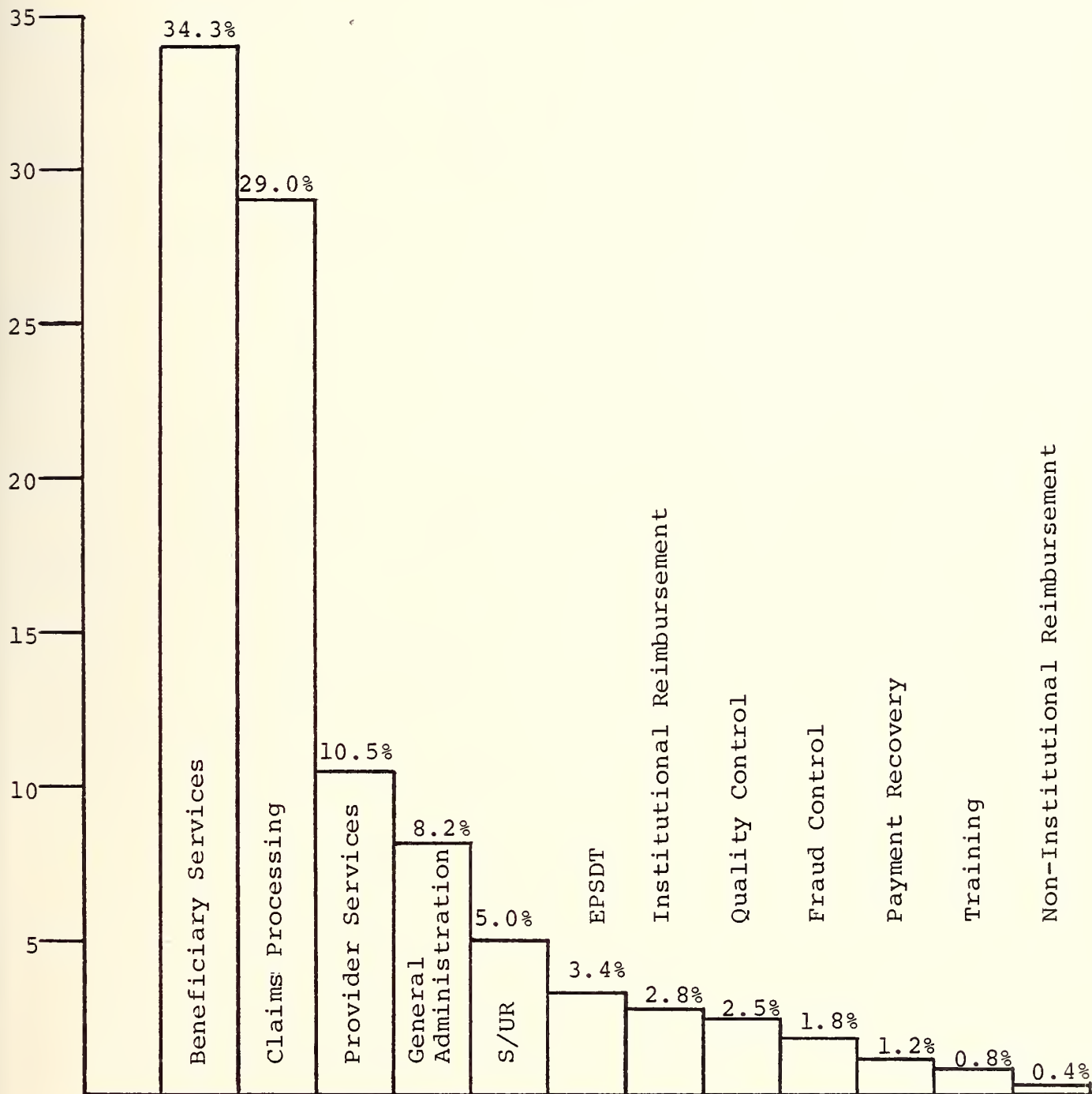


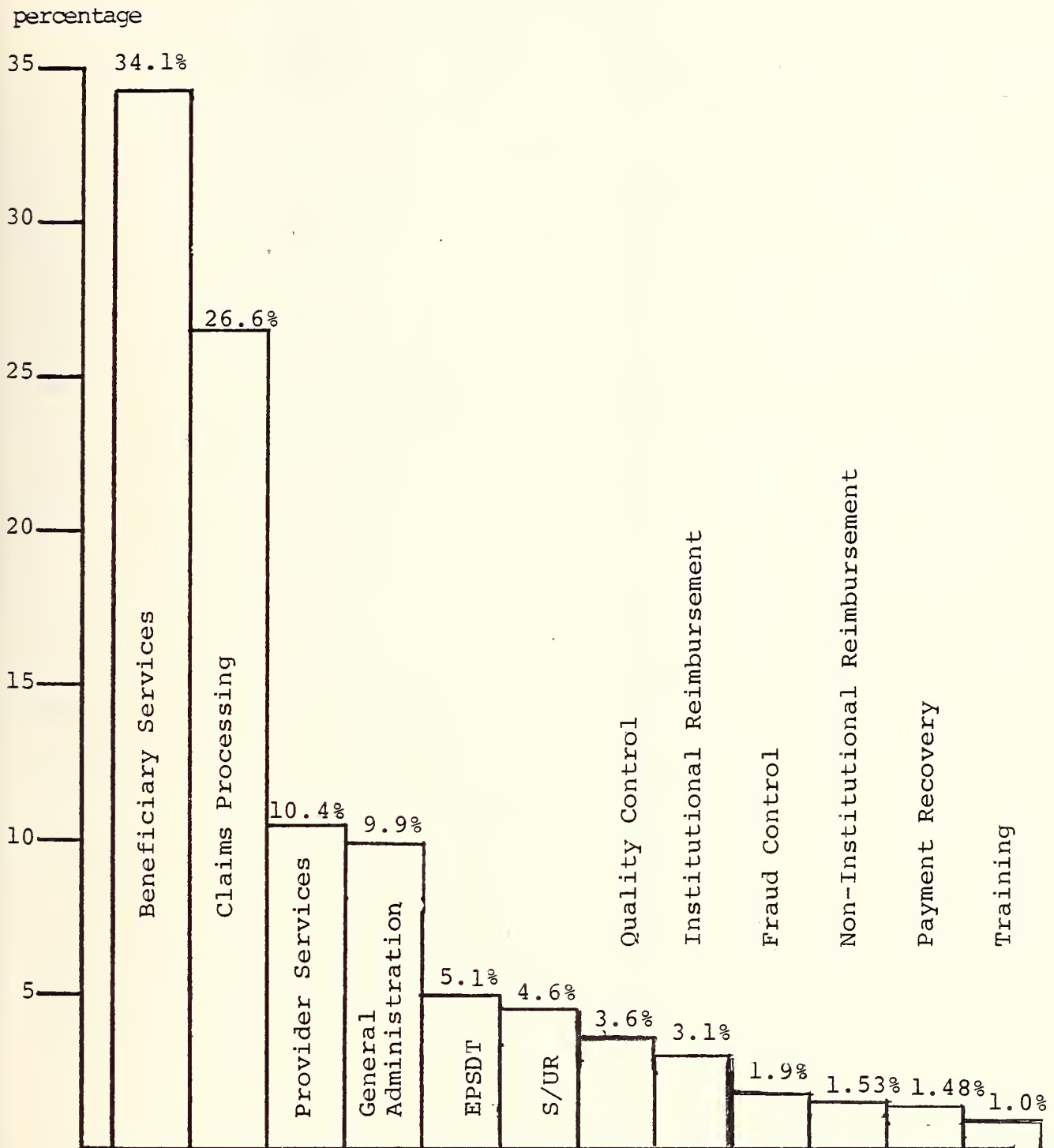


TABLE C - 2

AVERAGE COST AND UNWEIGHTED PERCENTAGES  
BY FUNCTIONAL AREA

<div>Cost and Percentage</div> <div>Functional Areas</div>	Average Cost (\$)	Unweighted Percentage (%)
General Administration	294,558	9.89
Training	30,209	0.96
Beneficiary Services	1,232,799	34.10
Quality Control	91,704	3.63
EPSDT	122,933	5.10
Provider Services	379,597	10.37
Claims Processing	1,044,670	26.58
Surveillance and Utilization Review	180,298	4.63
Payment Recovery	42,067	1.48
Fraud Control	65,428	1.89
Institutional Reimbursement	100,250	3.12
Non-Institutional Reimbursement	14,723	1.53



UNWEIGHTED PERCENTAGE OF COSTS  
BY FUNCTIONAL AREA



as the first functional area. Six subfunctional areas are included under this heading in the current study, while the previous study had three subfunctions for this heading. The basic difference between the two was the expansion of the second study to allow greater detail. However, the handling of the six-state study subfunction, Information Systems Planning makes the difference more complex than mere expansion. As reported in Chapter Two, this subfunction became part of the broader subfunction Planning and Policy. The difficulty arises when it is realized that the data collected under Information Systems Planning of the first study may be correctly included under Claims Processing - Developmental in this study.

Differences of this type occur in all aspects of the two studies. The eventual comparison of the results of these two studies is inevitable. That comparison is avoided here, however, because most of the discussion concerning the comparison would be devoted to explaining the data manipulations necessary to facilitate a comparison. It should suffice to say that any attempt to compare the results of the two studies should be prefaced with an extended discussion of the dissimilarity of the results in terms of definitions, functional areas, methodology, reporting periods and overall objectives.

#### D. MEDICAID ADMINISTRATIVE COSTS: BY STATE

The following table shows the set of 23 jurisdictions used in our subsequent analyses and the percentages of total Medicaid administrative costs for our sample which were incurred in each jurisdiction.





<u>Jurisdiction</u>	<u>Cost (\$)</u>	<u>Percentage</u>
Alabama	\$2.410 million	2.9
Alaska	0.437	.5
Arkansas	1.713	2.1
Colorado	3.129	3.8
Connecticut	2.962	3.6
District of Columbia	1.876	2.3
Florida	7.347	8.9
Georgia	4.821	5.8
Idaho	0.874	1.1
Iowa	2.636	3.2
Louisiana	3.045	3.7
Maryland	4.262	5.2
Massachusetts	6.900	8.3
New Hampshire	0.837	1.0
New Jersey	6.503	7.9
North Carolina	6.067	7.3
Pennsylvania	14.332	17.4
Puerto Rico	0.917	1.1
South Carolina	4.428	5.4
Tennessee	2.728	3.3
Virginia	3.037	3.7
West Virginia	1.344	1.6
Wyoming	0.184	0.2
	<hr/>	<hr/>
TOTAL	82.680	100.3*

\* Totals do not add due to rounding

The quarterly totals amounted to over 82 million dollars for the reporting states. This probably represents a third of the total quarterly expenditures for the national/state administration of the Medicaid program. Of this sum, clearly one state dominates, Pennsylvania's 14.3 million dollars represents over 17% of the total reported. The 1976 Administration/Training totals reported to HCFA had the following states in the top ten for expenditures:



California, New York, Michigan, Texas, Illinois, Massachusetts, Ohio, Pennsylvania, New Jersey, and Minnesota.\*

Our six leading respondents rank as follows: Pennsylvania, Ohio, Florida, Massachusetts, New Jersey, North Carolina and Georgia. Based upon this ranking Pennsylvania has overtaken Massachusetts since the 1976 rankings and Florida has clearly jumped in rank. Having discussed the magnitude of each state's administrative function and its peer ranking in our sample, we will now proceed to a more detailed discussion of the data by functional area.

#### E. COST: BY FUNCTION AND SUBFUNCTION

Having discussed the cost patterns of the twenty-three reporting jurisdictions as a whole, we will now discuss the variations in these costs and their proportion of the total costs for each of the jurisdictions. In some instances, summary statistics for proportions include both simple and weighted means. The value of this procedure is to allow the reader to derive some idea of the impact of size on the magnitude of the proportion. For example, when the simple average is larger than the weighted average value, then it is apparent that proportion is being dominated by the smaller sites.

#### ANALYSIS OF FUNCTIONAL AREA COSTS

The mean values for Table E-1 are based on the sample size of twenty-three valid reporters. This means that non-reporters are assumed to have a zero value for that major cost category. This assumption is not critical for the vast majority of cost categories - especially when a valid zero value is probably appropriate in many instances. Fraud Control and Non-Institutional Reimbursement are not the only two major functional areas where the mean value may be biased downward because the non-reported cells were actually (unknown) positive numbers.

A visual representation of the proportion of administrative costs attributed by reporting jurisdictions to the 12 functional areas appears in Graphs E-1 through E-12.

\*"Data on the Medicaid Program" p. 83.



TABLE E - 1  
COSTS BY FUNCTIONAL AREA AND BY STATE

State	FUNCTIONAL AREAS (\$)											Total
	1 General Administra- tion	2 Training	3 Beneficiary Services	4 Quality Control	5 EPSDT	6 Provider Services	7 Claims Processing	8 S/UR	9 Payment Recovery	10 Fraud Control	11 Insti- tutional Reimburse- ment	12 Non-Insti- tutional Reimburse- ment
Alabama	440,007	4,025	340,792	99,220	19,786	255,968	1,028,228	45,077	15,972		160,585	2,409,660
Alaska	44,254	881	2,338	23,838	143,211	46,206	107,656	32,772	7,609	800	27,890	437,455
Arkansas	201,052		439,611	39,987	4,498	446,539	514,950	60,276		3,092	3,316	1,713,321
Colorado	107,930	36,878	497,458	36,120	417,212	447,533	872,323	358,766	42,078	161,680	138,060	3,129,220
Connecticut	199,439	8,988	1,369,005	112,794	230,329	549,751	332,590	68,490	23,813	46,552	19,852	2,961,603
District of Columbia	14,551		1,038,178	66,708		146,701	381,294	67,755	160,494			1,875,681
Florida	136,009	11,720	1,313,866	93,330	141,278	1,061,001	4,171,508	148,261	18,650	77,299	158,404	7,347,219
Georgia	332,349	48,805	1,184,672	143,458	328,152	457,571	1,339,788	369,924	159,520	69,928	278,719	4,820,555
Idaho	49,747		465,125	20,000		8,655	204,985	21,600	13,080	46,702	44,075	873,969
Iowa	22,365	549	1,848,323	59,384	2,385	61,798	579,867	4,246	11,208		44,441	2,635,889
Louisiana	232,954	7,969	963,735	47,578	8,207	115,281	1,487,058	100,515	34,821		46,457	3,044,575
Maryland	363,238	21,537	1,663,674	52,619	24,925	556,225	978,984	137,593	122,293	80,909	242,247	4,261,696
Massachusetts	238,339	10,562	1,213,273	171,349	193,023	554,668	3,537,409	241,871		723,818	11,122	6,895,434
New Hampshire	288,865	2,786	130,866	29,760	17,082	102,655	190,837	28,403	4,057	370	40,995	836,676
New Jersey	1,386,513		629,623	66,665	72,541	827,061	1,938,081	842,132	108,633	182,408	449,605	6,503,262
North Carolina	136,959	253,605	2,730,116	437,694	17,516	425,268	1,018,101	792,605	22,434	19,863	212,603	6,066,764
Pennsylvania	366,960	217,686	7,311,623	200,567	1,090,661	1,567,768	2,639,337	486,554	183,442	53,928	213,505	14,332,031
Puerto Rico	114,258	55,058	653,108	66,504	4,563		16,996	6,125				916,612
South Carolina	1,609,224	9,009	1,185,127	181,275	32,497	230,429	852,517	190,777	10,564	16,444	110,123	4,427,986
Tennessee	113,249	4,641	1,134,924	8,154	12,835	436,875	778,821	58,992	14,217	2,880	21,418	2,727,865
Virginia	291,174		1,720,652	9,190	5,261	237,069	642,763	71,368	5,849	17,798	35,383	3,036,507
West Virginia	59,674	112	483,483	114,639	14,061	192,263	387,507		5,453		45,824	1,343,970
Wyoming	25,719		34,801	28,367	47,432	3,457	25,799	12,744	3,357	373	1,125	184,475
Total	6,774,829	694,811	28,354,373	2,109,200	2,827,455	8,730,742	24,027,399	4,166,846	967,544	1,504,844	2,305,749	82,782,425
Average Expenditure (n=23)	294,558	30,209	1,232,799	91,704	122,933	379,597	1,044,670	180,298	42,067	65,428	100,250	14,723





TABLE E - 2 PROPORTION OF COSTS BY FUNCTIONAL AREA AND BY STATE

State	FUNCTIONAL AREAS (%)												TOTAL
	General Administration	Training	Beneficiary Services	Quality Control	EPDFT	Provider Services	Claims Processing	S/UR	Payment Recovery	Fraud Control	Institutional Reimbursement	Non-Institutional Reimbursement	
Alabama	18.26	0.17	14.14	4.12	0.82	16.62	42.67	1.87	0.66	--	6.66	--	99.99
Alaska	10.12	0.20	0.53	5.45	32.74	10.56	24.61	7.49	1.74	0.18	6.38	--	100
Arkansas	11.73	--	25.66	2.33	0.26	26.06	30.06	3.52	--	0.18	0.11	--	99.99
Colorado	3.42	1.17	15.76	1.14	13.21	14.17	28.52	11.36	1.33	5.12	4.37	0.42	99.99
Connecticut	6.63	0.30	46.23	3.81	7.78	18.56	11.23	2.31	0.80	1.57	0.67	--	99.99
District of Columbia	0.78	--	55.35	3.56	--	7.82	20.33	3.61	8.56	--	--	--	100.01
Florida	1.85	0.16	17.88	1.27	1.92	14.44	56.78	2.02	0.25	1.05	0.22	--	100.0
Georgia	6.89	1.01	24.58	2.98	6.81	9.49	27.79	7.67	3.31	1.45	5.78	2.23	99.99
Idaho	5.69	--	53.22	2.29	--	0.99	23.45	2.47	1.50	5.34	5.04	--	99.99
Iowa	0.85	0.02	70.12	2.25	0.09	2.34	22.0	0.16	0.43	--	1.69	0.05	100.0
Louisiana	7.65	0.26	31.65	1.56	0.27	3.79	48.84	3.30	1.14	--	1.53	--	99.99
Maryland	8.52	0.51	39.04	1.23	0.58	13.05	22.97	3.23	2.87	1.90	5.68	0.41	99.99
Massachusetts	3.46	0.15	17.60	2.48	2.80	8.04	51.30	3.51	--	10.50	0.16	--	100.0
New Hampshire	34.53	0.33	15.64	3.56	2.04	12.27	22.81	3.39	0.48	0.04	4.70	--	99.99
New Jersey	21.32	--	9.68	1.03	1.12	12.72	29.80	12.95	1.67	2.81	6.71	--	100.01
North Carolina	2.49	4.61	49.64	7.96	0.32	7.73	18.51	13.06	0.41	0.36	3.87	--	100.0
Pennsylvania	2.56	1.52	51.02	1.40	7.61	10.94	18.42	3.39	1.28	0.38	1.49	--	100.01
Puerto Rico	12.47	6.01	71.25	7.26	0.50	--	1.85	0.67	--	--	--	--	100.01
South Carolina	36.34	0.20	26.76	4.09	0.73	5.20	19.25	4.31	0.24	0.37	2.49	--	99.98
Tennessee	4.15	0.17	41.60	0.30	0.47	16.02	28.55	2.16	0.52	0.11	0.79	5.16	100.0
Virginia	9.59	--	56.67	0.30	0.17	7.81	21.17	2.35	0.19	0.59	1.17	--	100.01
West Virginia	4.44	0.01	35.97	8.53	1.05	14.31	28.83	--	0.41	--	3.41	3.05	100.01
Wyoming	13.94	--	18.86	15.38	25.71	1.87	13.99	6.91	1.82	0.20	0.61	0.71	100.0
TOTAL	227.78	16.80	788.85	84.28	107.0	228.80	613.73	92.75	29.61	32.15	65.95	12.25	
Unweighted Mean	9.90	0.99	34.30	3.66	4.65	12.56	26.68	4.03	1.29	1.40	2.87	0.53	
Weighted Mean	8.24	0.84	34.48	2.56	3.44	10.62	29.25	4.35	1.18	1.83	2.80	0.41	





The actual amounts are less interesting than a comparison of the percentages of costs incurred in each area. These percentage figures appear in Table E-2 immediately following the cost data. The unweighted mean of costs incurred in the General Administration, Functional Area 1, is 9.9%. However, this number could be biased upward because New Hampshire and South Carolina reported values of 35% and 36% respectively. These high percentages may be the result of using this functional area as a "catchall" for costs which these states could not distribute to the other areas. The weighted mean is 8.2%. General Administration accounted for costs ranging from South Carolina's high of 36% to 0-1.0% as reported by the District of Columbia and Iowa.

This range represents the third widest of the twelve functional areas under consideration. The median value was 7%, with three of the 23 reporting jurisdictions identifying this value.

The range of costs for this functional area displays a high of over \$1.6 million (South Carolina) and a low of \$14,551 (District of Columbia). The mean value was \$294,558.

The second functional area (Training) has a mean of \$30,209. Costs in this area make up a uniformly low percentage of the total administrative cost. The weighted mean is 0.8% and the range is only from 0 to 6%. Only seventeen of the twenty-three jurisdictions reported any costs in this area, and our discussions with those in charge of preparing the data indicate that the other six states did not, in fact, incur any costs in this area. Eleven of these values were in the 0.-0.4% range. The highest percentage (6%) was reported by Puerto Rico. This functional area evidently consumes a very small portion of overall administrative costs and the values are consistently within a narrow range. The median value is in the 0-0.3% range.

The third functional area (Beneficiary Services) is the largest area of costs incurred with the states spending an average of over one million dollars. As one would expect, there is a large range of costs incurred in this area depending upon the size of the



Medicaid program. For example, the range of expenditures is from \$2,338 for Alaska to over seven million dollars for Pennsylvania. On average, states incur about 34% of their administrative costs for Beneficiary Services. There is a surprisingly large degree of variation even in the proportions of costs incurred in this area. The percentage of costs ranges from 1% to 71% for the twenty-three states which provided valid data.

The fourth functional area (Quality Control) has an average expenditure level of about \$91,000 with a range from over \$8154 to \$400,000. Twenty-two states reported values ranging from 15% to 0% for this area. Upon examining the percentages spent by each state, we note that the percentage distribution falls within a narrow range. The mean percentage is 2.5 with nearly all observations falling in the zero to ten percent range. The one exception is Wyoming which incurred 15% of its costs here.

Functional Area 5 (EPSDT) has an average expenditure level of about \$122,933 reflecting a range of expenditures of twenty-three hundred for Iowa to over one million dollars for Pennsylvania. On average, states spend 4.6% of their administrative dollars under EPSDT. However, this unweighted mean percentage includes two high observations -- 33% for Alaska and 26% for Wyoming. The weighted mean for this area is 3.4%. Fifteen jurisdictions report costs falling in the 0 - 3% range.

Provider Services, the sixth functional area, has a mean expenditure level of \$379,597, which accounts for a weighted mean of 10.6% of total administrative costs. Costs of provider services ranged from \$3,457 in Wyoming to over \$1.5 million in Pennsylvania. The twenty-two reporting jurisdictions fall into a range of 26% to .9%, with a median value of 9%. Arkansas' 26% is substantially greater than Connecticut's 19%, which itself is above the grouping of most jurisdictions which fall into the 14% to 2% range.

The percentage of costs attributed to Functional Area 7, Claims Processing displays the second widest range of the 12 functional areas, but an even distribution of the 23 values reported. The



highest value was reported by Florida at 57% while Puerto Rico reported only 2%. The median value of 23% was reported by Idaho, Maryland and New Hampshire. This area accounted for a high level of state administrative expenditures, with a mean expenditure of over \$1 million. Expenditures ranged from almost \$17,000 in Puerto Rico to \$4.1 million in Florida. Thus, Florida's expenditures for Claims Processing are high not only in absolute terms, but in terms of proportion of total administrative costs as well.

Twenty-two jurisdictions provided percentage costs in Functional Area 8, Surveillance/Utilization Review (S/UR). The values ranged from 13% as reported by North Carolina to 0% reported by Iowa. The costs ranged from a low of \$4,000 in Iowa to a high of over \$800,000 in New Jersey. The mean cost was \$180,298. On the average, S/UR accounts for approximately 4% of total state Medicaid administrative expenditures. Only two states, Colorado and New Jersey spent more than 10% of total administrative resources on S/UR, with expenditures of 11% and 13%, respectively.

The range of costs reported for Functional Area 9, Payment Recovery was 0% to 9%. Twenty jurisdictions submitted valid figures, with the District of Columbia reporting the highest figure of 9% and seven states reporting 0%. The median and mean values were 1%.

This functional area receives a very small proportion of state administrative resources. The mean state expenditure for this functional area was \$42,067, ranging from under \$3,400 in Wyoming to a high of \$183,000 in Pennsylvania.

Sixteen jurisdictions reported on the percentage of costs attributed to Functional Area 10, Fraud Control. Massachusetts had the highest percentage at 11%, while eight states reported values in the 0 to 0.4% range. The median value of 1% was reported by Florida, Georgia and Virginia. Three states, Colorado, Idaho and Massachusetts, spent 5% or more of total administrative resources on Fraud Control.





Key to Abbreviations in Graphs:

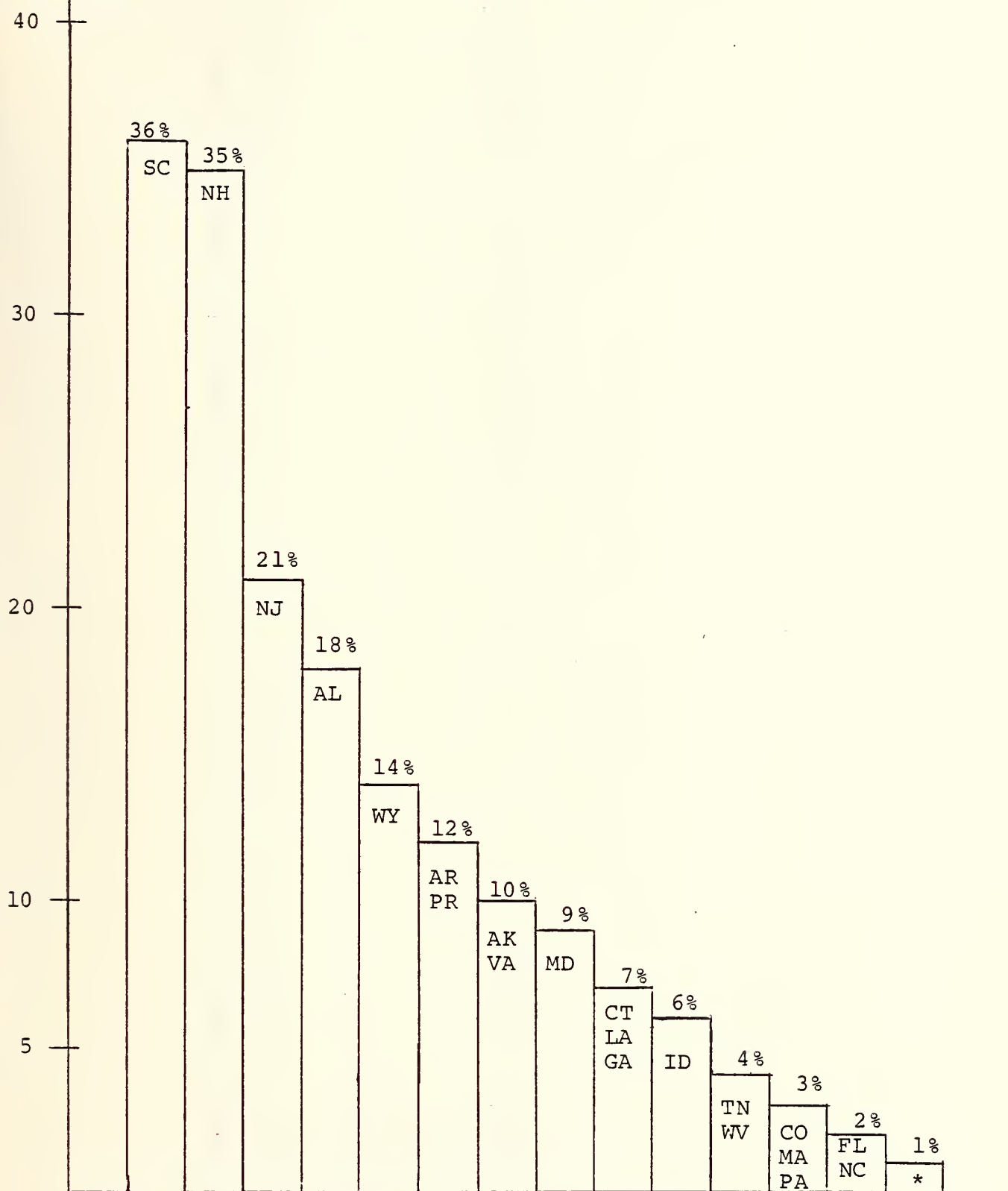
AL - Alabama  
AK - Alaska  
AR - Arkansas  
CO - Colorado  
CT - Connecticut  
DC - District of Columbia  
FL - Florida  
GA - Georgia  
ID - Idaho  
IA - Iowa  
LA - Louisiana  
MD - Maryland  
MA - Massachusetts  
NH - New Hampshire  
NJ - New Jersey  
NC - North Carolina  
PA - Pennsylvania  
PR - Puerto Rico  
SC - South Carolina  
TN - Tennessee  
VA - Virginia  
WV - West Virginia  
WY - Wyoming





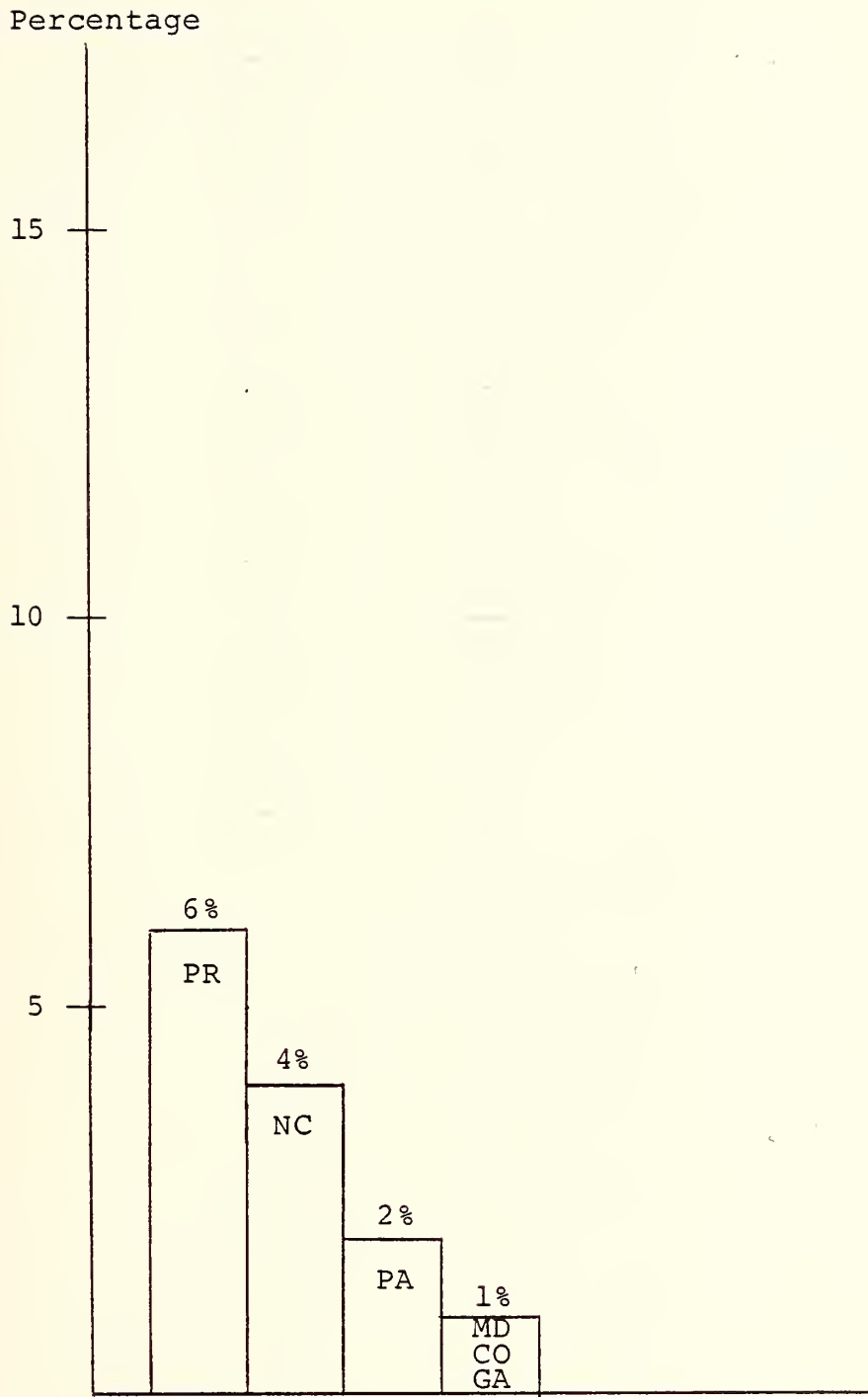
GRAPH E-1  
FUNCTIONAL AREA #1  
(GENERAL ADMINISTRATION)

Percentage



\*The District of Columbia reported 0.78%.  
Iowa reported 0.85%.



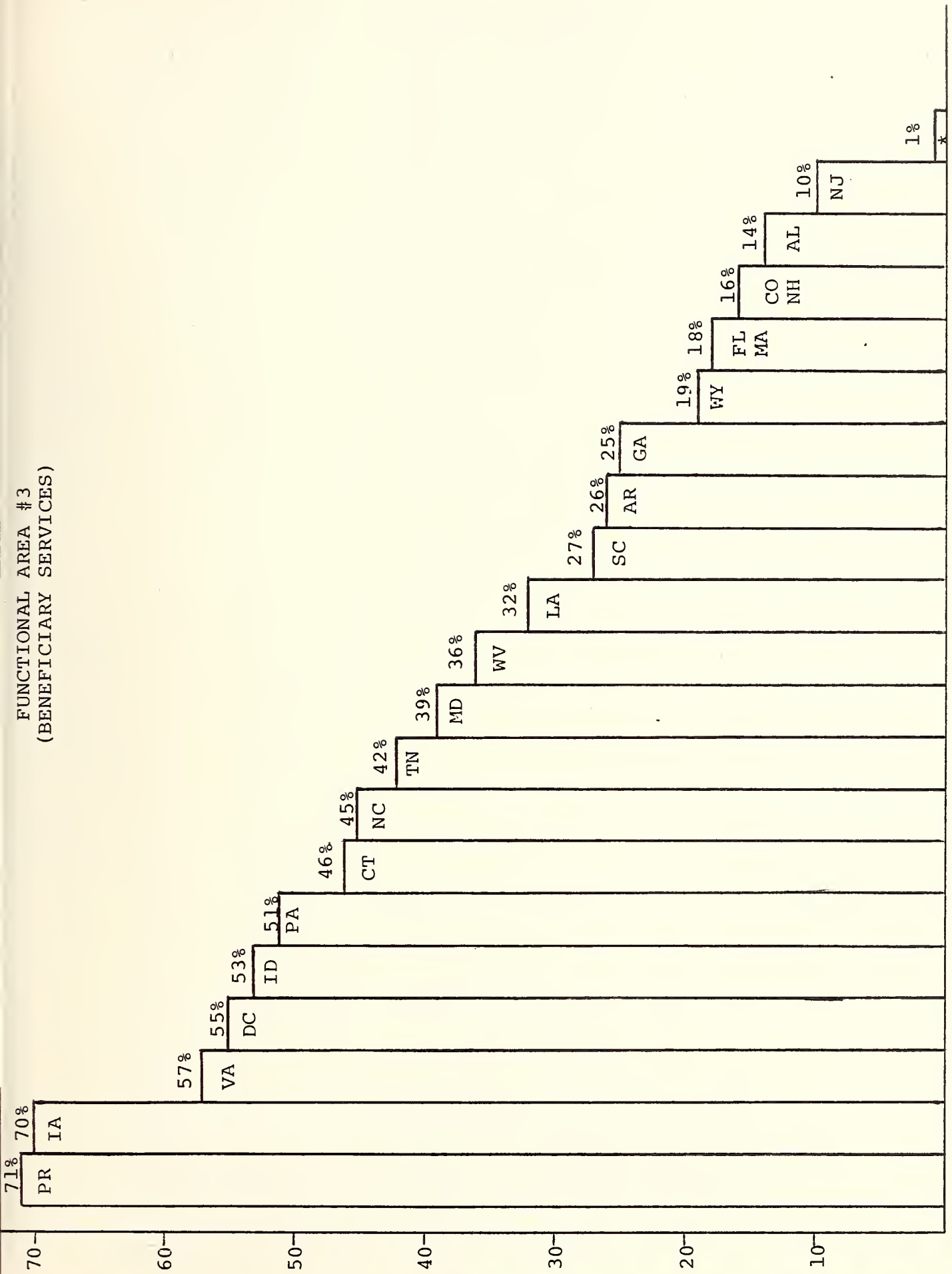
FUNCTIONAL AREA #2  
(TRAINING)

Note: Alabama, Alaska, Connecticut, Florida, Iowa, Louisiana, Massachusetts, New Hampshire, South Carolina, Tennessee and West Virginia reported 0 - 0.3%.

Arkansas, District of Columbia, Idaho, New Jersey, Virginia and Wyoming did not report data in this category.



FUNCTIONAL AREA #3  
(BENEFICIARY SERVICES)

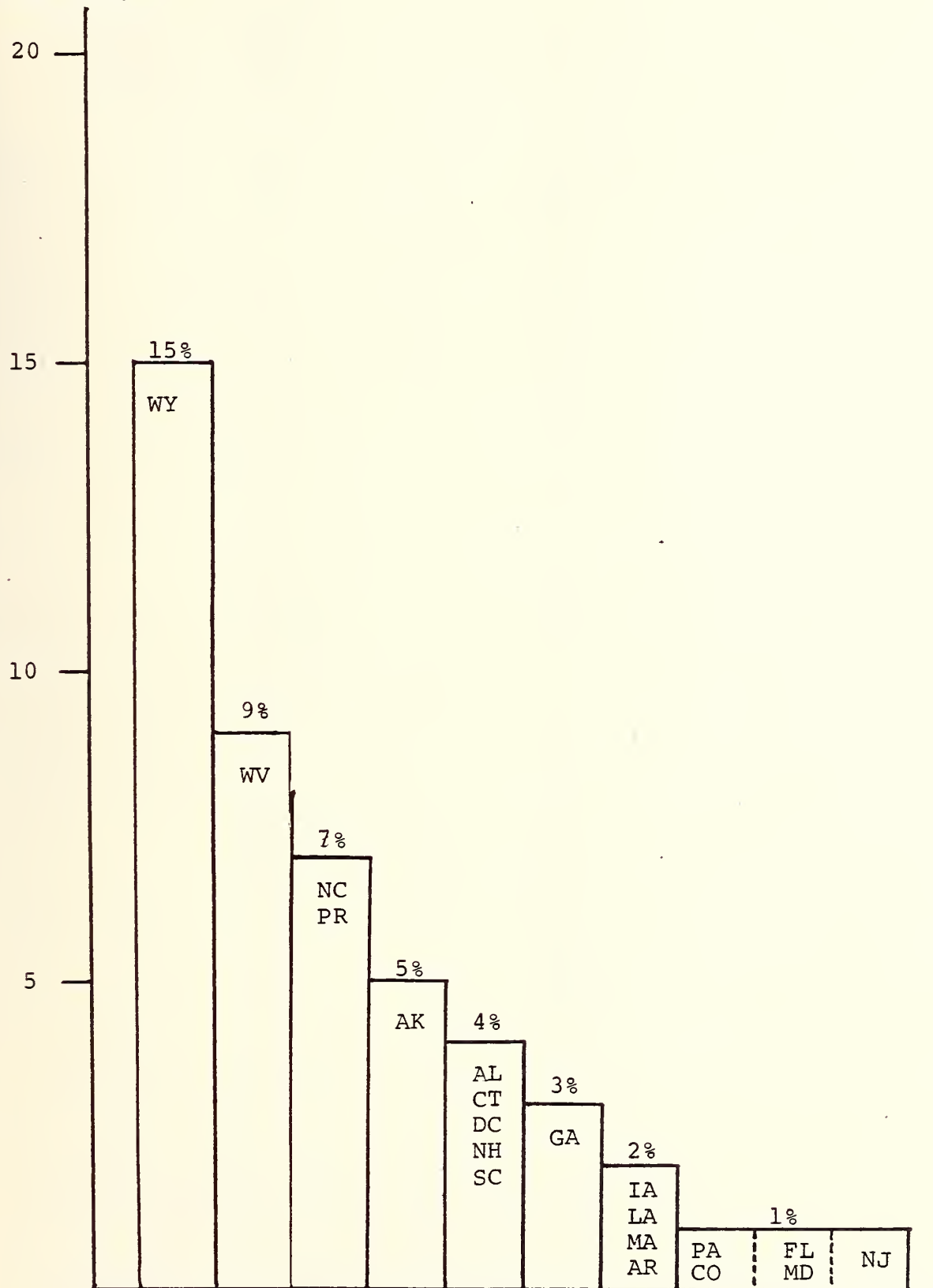


\*Alaska reported 1% of total cost



FUNCTIONAL AREA #4  
(QUALITY CONTROL)

Percentage

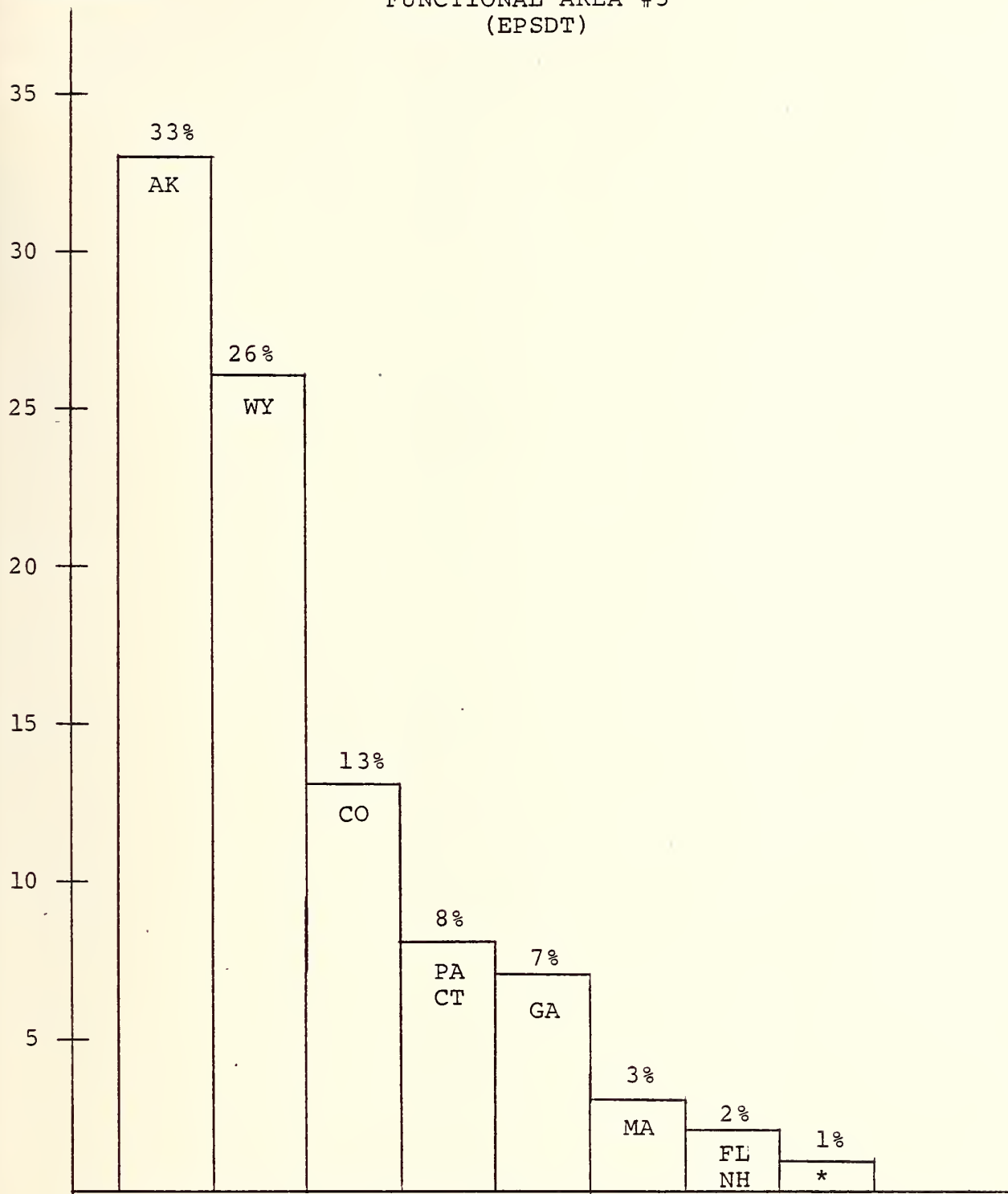


Note: Virginia and Tennessee reported .30%.





Percentage

FUNCTIONAL AREA #5  
(EPSDT)

\*Alabama, Maryland, New Jersey, South Carolina, West Virginia = 1%.

Note: Arkansas, Iowa, Louisiana, North Carolina, Puerto Rico, Tennessee, and Virginia reported .09 - .50%.

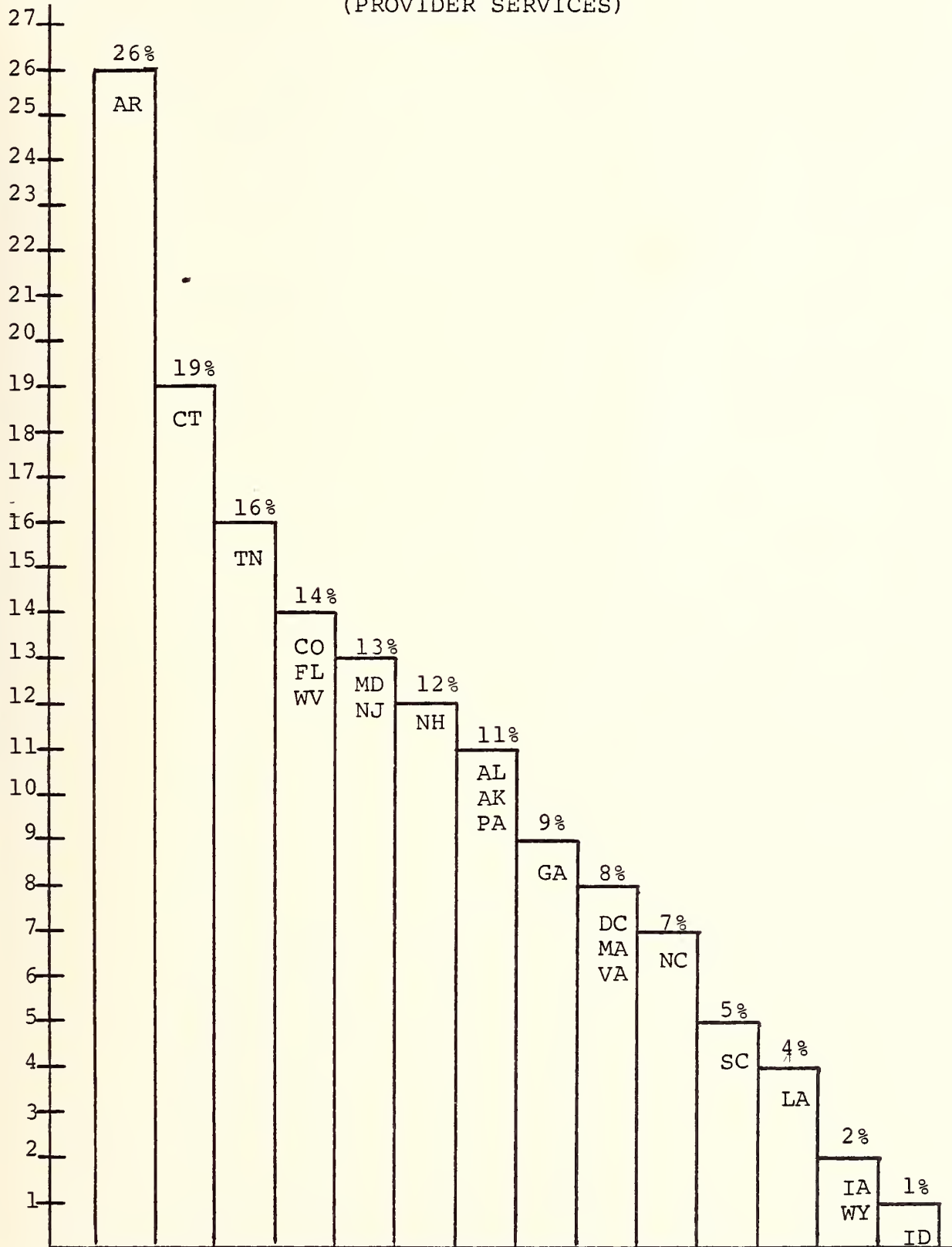
The District of Columbia and Idaho did not report data in this category.



GRAPH E - 6

Percentage

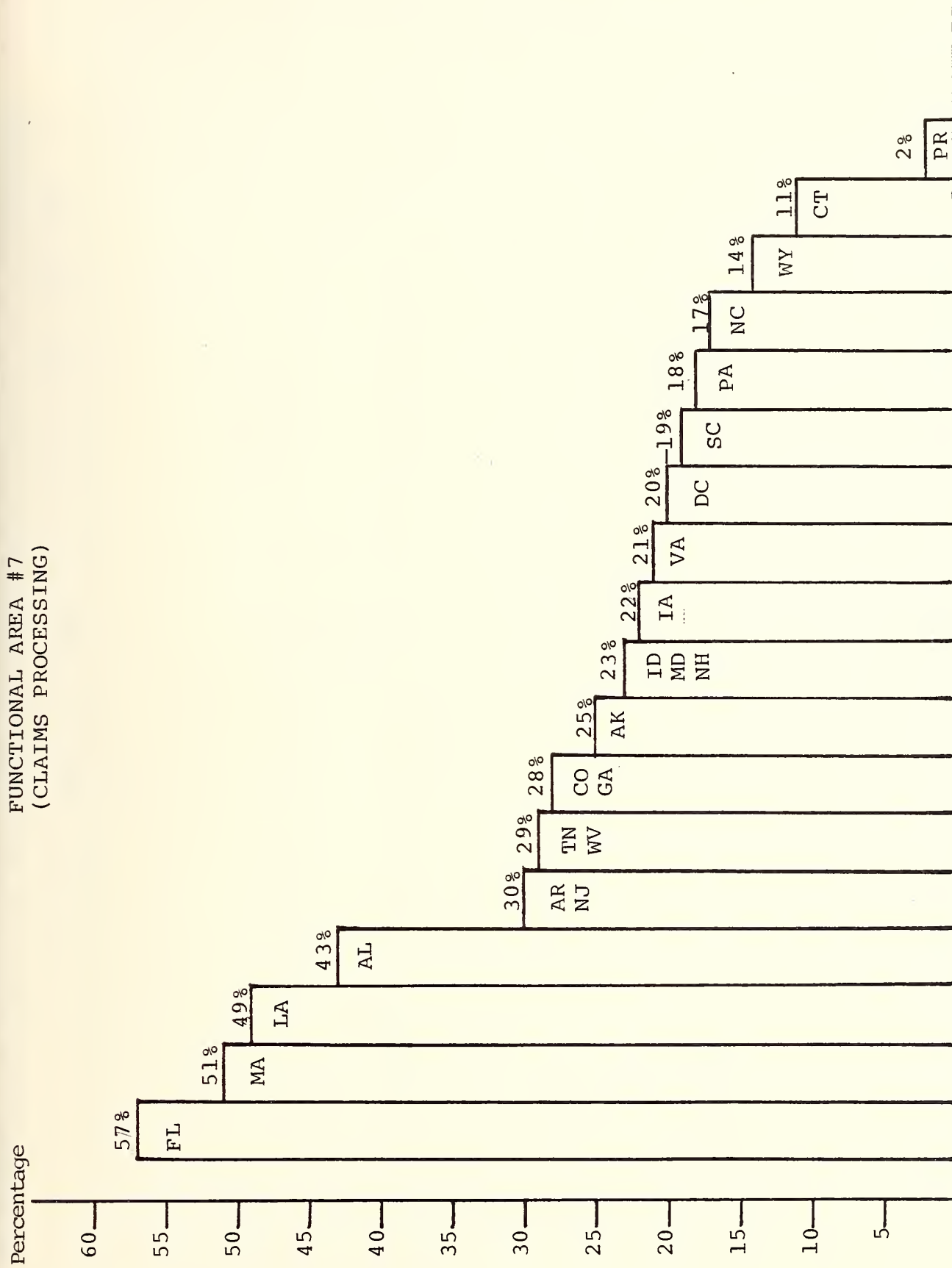
FUNCTIONAL AREA #6  
(PROVIDER SERVICES)



Note: Puerto Rico did not report data in this category.



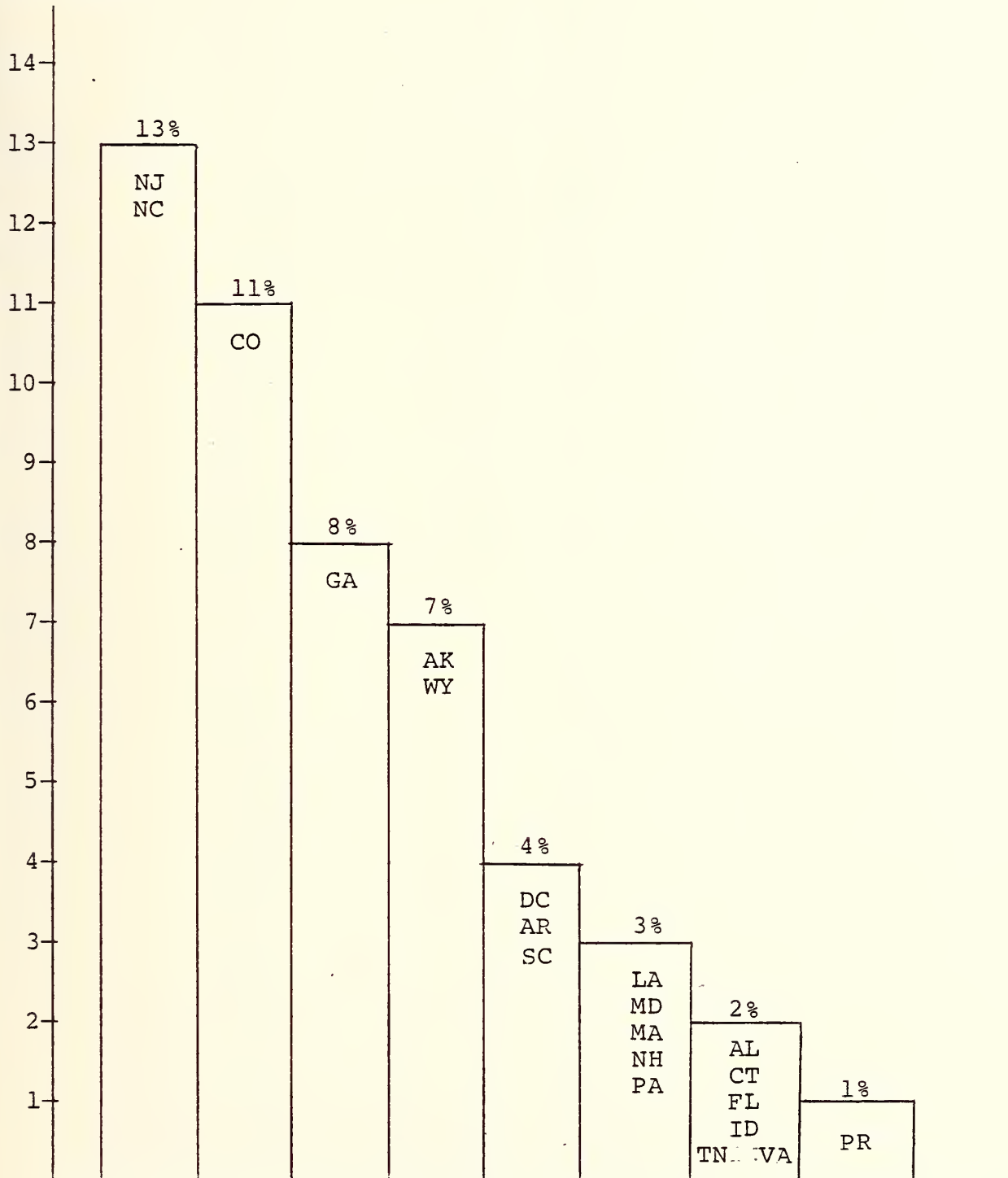
FUNCTIONAL AREA #7  
(CLAIMS PROCESSING)





FUNCTIONAL AREA #8  
(SURVEILLANCE/UTILIZATION REVIEW)

Percentage



Note: Iowa reported 0.16%

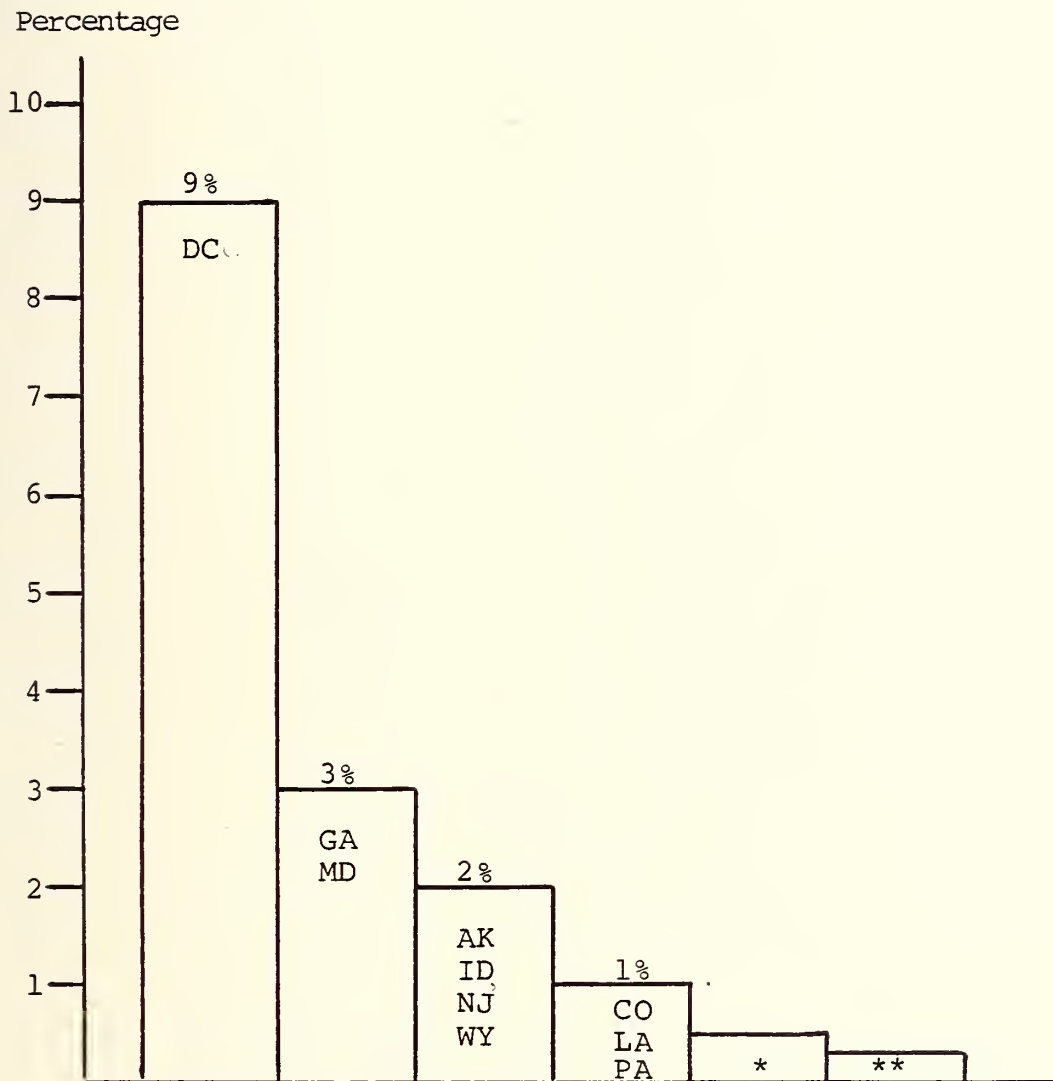
West Virginia did not report data in this category.





GRAPH E - 9

FUNCTIONAL AREA #9  
(PAYMENT RECOVERY)



\* Alabama, Connecticut, and Tennessee reported 0.5 - 1%.

\*\* Florida, Iowa, New Hampshire, North Carolina, South Carolina, Virginia and West Virginia reported 0 - 0.4%.

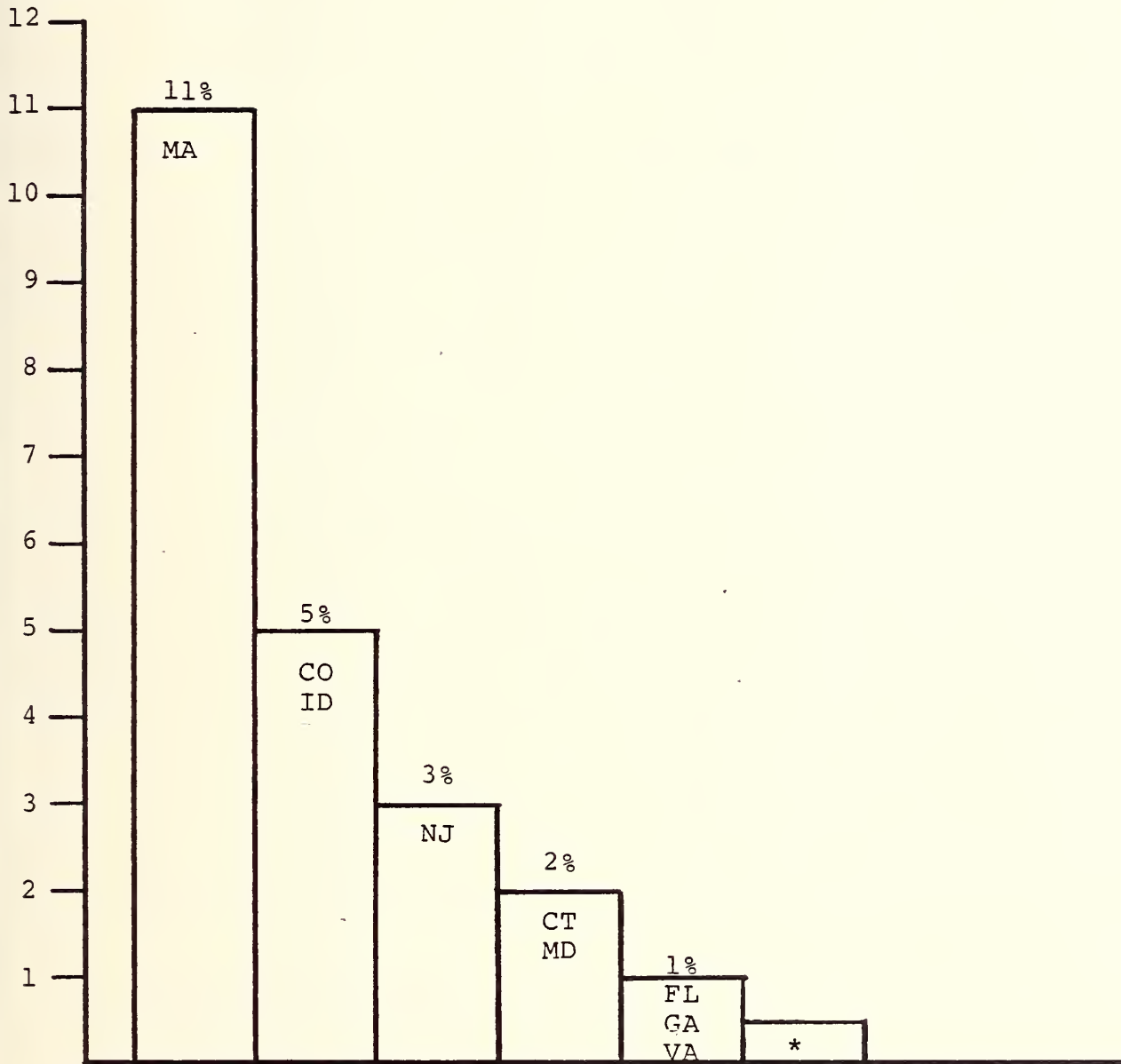
Note: Arkansas, Massachusetts and Puerto Rico did not report data in this category.



GRAPH E - 10

FUNCTIONAL AREA #10  
(FRAUD CONTROL)

Percentage



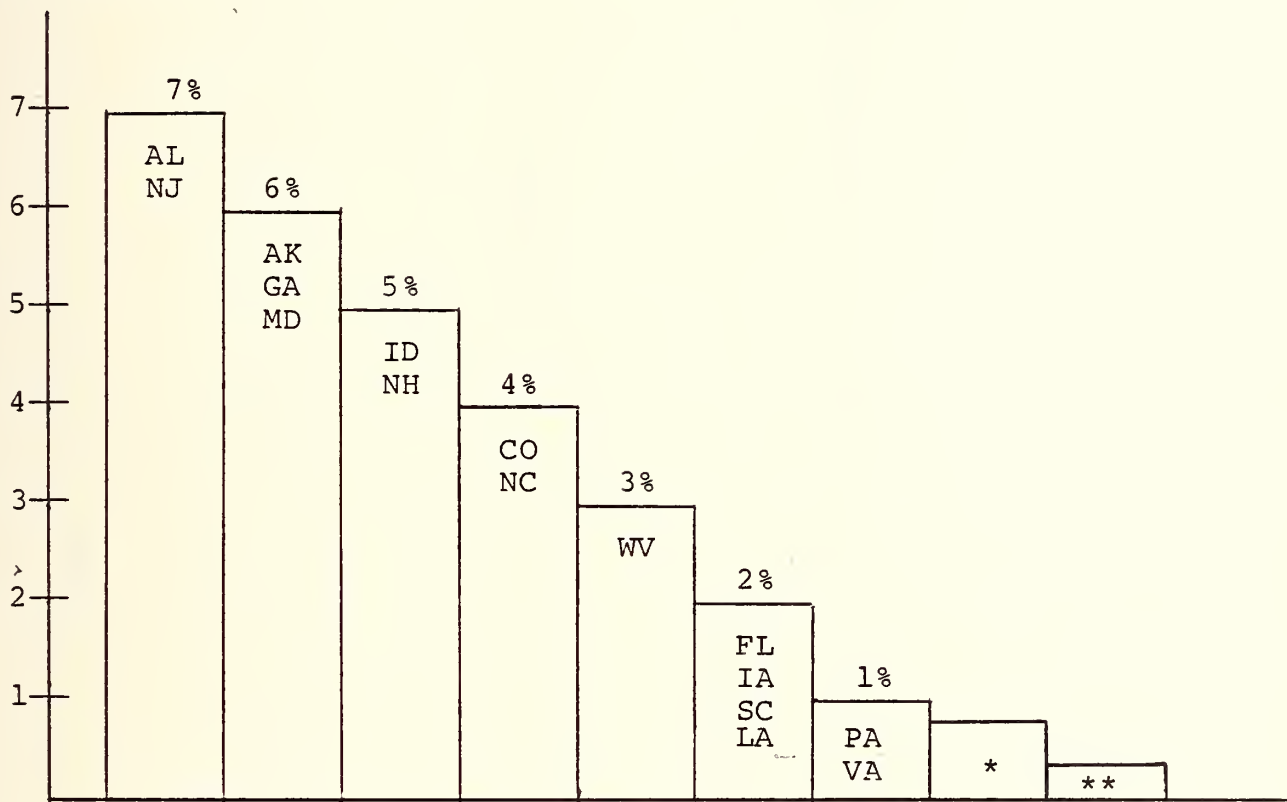
\* Alaska, Arkansas, New Hampshire, North Carolina, Pennsylvania, South Carolina, Tennessee, and Wyoming reported 0 - 0.4%.

Note: Alabama, the District of Columbia, Iowa, Louisiana, Puerto Rico, and West Virginia did not report data in this category.



FUNCTIONAL AREA #11  
(INSTITUTIONAL REIMBURSEMENT)

Percentage



\*Connecticut, Tennessee, and Wyoming reported 0.5 - 0.9%.

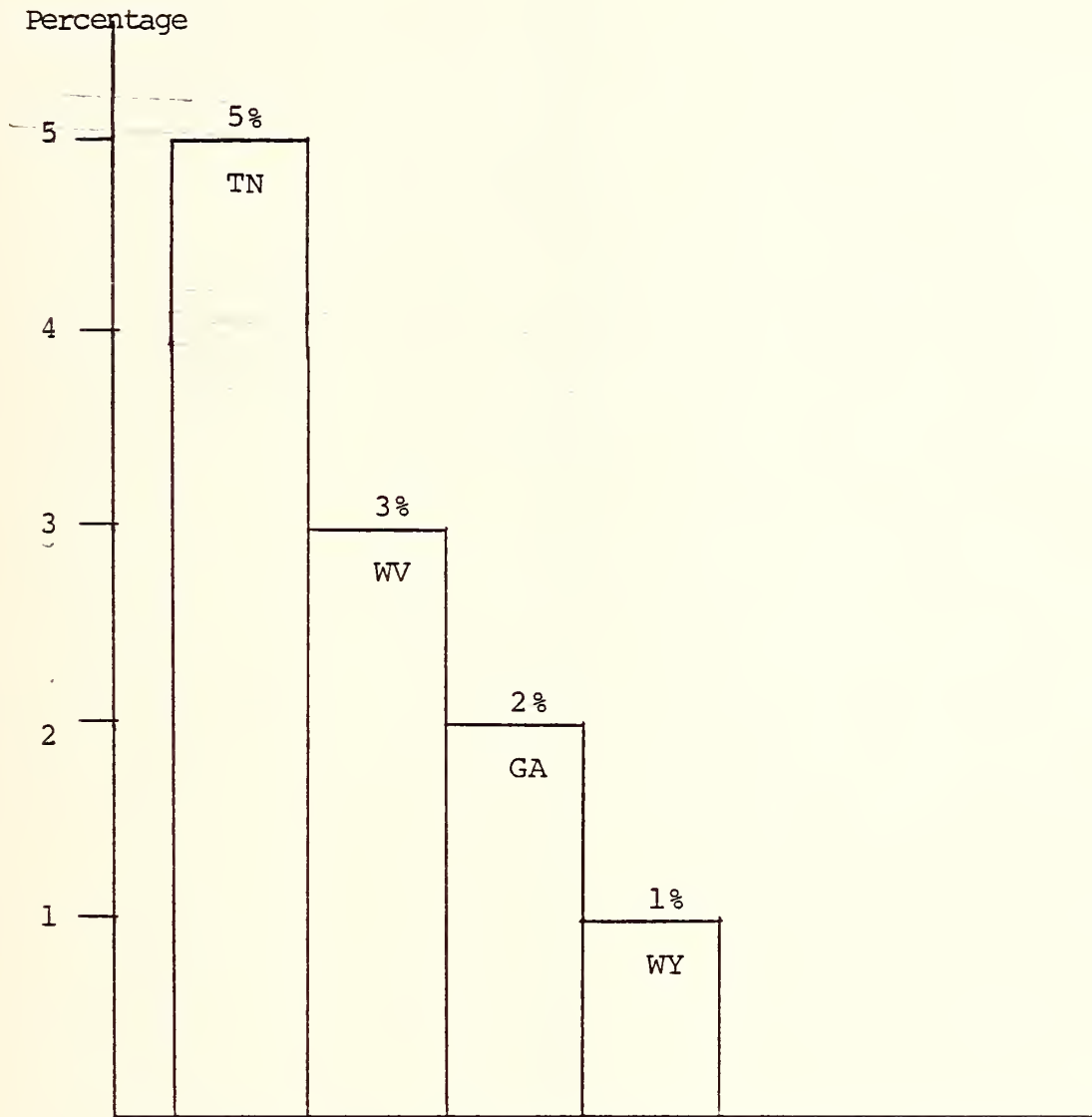
\*\* Arkansas and Massachusetts reported 0 - 0.4%.

The District of Columbia and Puerto Rico did not report data in this category.



GRAPH E - 12

FUNCTIONAL AREA #12  
(NON-INSTITUTIONAL REIMBURSEMENT)



Note: Colorado, Florida, Iowa and Maryland reported 0 - 0.4%.

Fifteen jurisdictions did not report data in this category.





This area also accounted for a small portion of state administrative expenditures, with a mean level of \$65,428. There was a wide range in spending from a low of \$370 in New Hampshire to a high of \$724,000 in Massachusetts.

Twenty-one jurisdictions supplied values for Functional Area 11, Institutional Reimbursement. The values fall within a narrow range, with a high of 7% and a low of 0%. The median value was 2%. The mean state expenditure level was \$100,250 with a range from \$1,000 (Wyoming) to \$450,000 (New Jersey). Again, this functional area represented a small proportion of administrative costs, with a mean of less than 3%. The percentage of expenditures for this functional area were fairly close for all states reporting, ranging from 0 (Arkansas, Massachusetts) to 7% (Alabama, New Jersey) of total administrative costs.

Only eight of the twenty-three states included in this analysis reported significant expenditures for the last functional area, Non-Institutional Reimbursement. The mean expenditure level for these eight states was \$14,723 with a range from about \$1,000 in Wyoming to \$141,000 in Tennessee. Overall, less than 1% of state administrative expenditures went to this functional area, with a high of 5% in Tennessee. The median value was 0.5%.

#### ANALYSIS OF SUBFUNCTIONAL COSTS

A discussion of the subfunctional costs reported in ten functional areas is presented in this section.\* For each of the ten, a table presenting the reported subfunctional costs and another table showing the reported cost as a percentage of the functional area are included. Reviewing each table should facilitate the comparison of actual and relative costs for a subfunction among the reporting states. Not all states were able to provide subfunctional costs for all the areas even though they may have provided cost data

\* Since areas #2, Training and #12, Non-Institutional Reimbursement were not divided into subfunctions, they have been excluded from this discussion.



for the functional area. Others were able to provide only a partial disaggregation for certain areas. In these cases, the states are considered non-reporting despite their submission of data which was usable in other sections of the analysis.

### General Administration

The first functional area, General Administration, was divided into six subfunctions on the cost matrix. Table E - 3 shows the General Administration costs by subfunction for the twenty-one states included in this analysis, while Table E - 4 shows the percentage of total General Administration represented by each reported subfunctional cost for a state.

Federal Statistical Reporting. Statistical reporting was defined as the activities involved in the preparation and submission of the required Federal Statistical Reports concerning fraud and abuse control, utilization and expenditures, etc. Of the six General Administration subfunctions, statistical reports had the lowest reported total for the quarter (\$117,896) and the smallest mean (\$6,935). Alaska reported the lowest quarterly cost, \$267 while Connecticut reported costs of \$24,324, the quarter's highest mark. The highest percentage of functional cost for statistical reporting was 17.0% in Puerto Rico. The low was less than one tenth of a percent reported by South Carolina. The un-weighted mean for statistical reporting as a percentage of general administration was 4.0%. The weighted mean was 1.8%.

Federal Financial Reporting. Financial reporting is similar to the preceding subfunction, but concerns activities associated with the submission of required financial reports including budget projections, quarterly expenditures, and quarterly estimates. These expenditures totaled \$170,611 in the seventeen reporting states. The mean for the states was \$10,036 for the quarter. Arkansas' \$68,438 was the highest cost reported and accounted for 34% of the total quarterly costs reported as a percentage. Of its administrative costs, financial reporting in Arkansas accounted for 34%



TABLE E-3  
SUBFUNCTIONAL COSTS FOR #1 GENERAL  
ADMINISTRATION BY STATES

Subfunctions States	Federal Statistical Reporting (\$)	Federal Financial Reporting (\$)	State Internal Reporting (\$)	Planning and Policy (\$)	Automated Data Processing (\$)	Other General Administration (\$)	Total General Administration
Alabama	14,071	6,799	17,465	11,126	260,331	130,215	440,007
Alaska	267	7,202	--	12,128	207	24,450	44,254
Arkansas	4,365	68,438	--	4,347	23,338	100,564	201,052
Colorado	5,657	2,327	5,096	65,387	--	29,463	107,930
Connecticut	24,324	6,517	25,559	28,090	18,549	96,400	199,439
Florida	10,094	1,509	--	34,606	89,800	--	136,009
Georgia	4,389	8,522	8,522	81,307	215,177	14,432	332,349
Idaho	410	1,259	778	14,000	9,000	24,300	49,747
Iowa	477	1,372	1,372	12,210	--	6,935	22,366
Louisiana	--	--	29,454	--	43,959	159,541	232,954
Massachusetts	3,612	2,539	2,083	53,941	32,081	144,083	238,339
New Hampshire	1,458	12,772	1,458	4,284	106,836	162,057	288,865
New Jersey	16,625	17,271	198,600	49,704	56,305	1,048,008	1,386,513
North Carolina	--	--	--	118,608	--	18,351	136,959
Pennsylvania	--	--	--	191,200	3,836	171,924	366,960
Puerto Rico	19,416	14,697	7,417	6,407	--	66,321	114,258
South Carolina	716	1,576	1,220,797	42,923	329,169	14,043	1,609,224
Tennessee	9,141	13,847	4,050	9,554	18,393	58,264	113,249
Virginia	1,707	2,674	3,066	21,267	82,692	179,768	291,174
West Virginia	--	--	--	35,214	--	24,461	59,675
Wyoming	1,167	1,290	2,376	2,374	--	18,512	25,719
Total	117,896	170,611	1,528,093	798,677	1,289,673	2,492,092	6,397,042
Mean	6,935	10,036	101,873	39,934	85,978	124,605	369,361





TABLE E-4

SUBFUNCTIONS AS A PERCENTAGE OF FUNCTIONAL COST FOR  
#1 GENERAL ADMINISTRATION BY STATE

Subfunctions STATES	Federal Statistical Reporting (%)	Federal Financial Reporting (%)	State Internal Reporting (%)	Planning and Policy (%)	Automated Data Processing (%)	Other General Admin. (%)
Alabama	3.2	1.5	4.0	2.5	59.2	29.6
Alaska	0.6	16.3	--	27.4	0.5	55.2
Arkansas	2.2	34.0	--	2.2	11.6	50.0
Colorado	5.2	2.2	4.7	60.6	--	27.3
Connecticut	12.2	3.3	12.8	14.1	9.3	48.3
Florida	7.4	1.1	--	25.4	66.0	--
Georgia	1.3	2.6	2.6	24.5	64.7	4.3
Idaho	0.8	2.5	1.6	28.1	18.1	48.8
Iowa	2.1	6.1	6.1	54.6	--	31.0
Louisiana	--	--	12.6	--	18.9	68.5
Massachusetts	1.5	1.1	0.9	22.6	13.5	60.5
New Hampshire	0.5	4.4	0.5	1.5	37.0	56.1
New Jersey	1.2	1.2	14.3	3.6	4.1	75.6
North Carolina	--	--	--	86.6	--	13.4
Pennsylvania	--	--	--	52.1	1.0	46.9
Puerto Rico	17.0	12.9	6.5	5.6	--	58.0
South Carolina	0.0	0.1	75.9	2.7	20.5	0.9
Tennessee	8.1	12.2	3.6	8.4	16.2	51.4
Virginia	0.6	0.9	1.1	7.3	28.4	61.7
West Virginia	--	--	--	59.0	--	41.0
Wyoming	4.5	5.0	9.2	9.2	--	72.0
Unweighted Mean	4.0	6.3	10.4	24.9	24.6	45.0
Weighted Mean	1.8	2.7	23.8	12.5	20.2	39.0





of the total General Administration expenditure. The unweighted mean was 6.3% and the weighted mean was 2.7%. Florida reported the lowest cost (\$1,509) while South Carolina's 0.1% of total General Administration was the lowest percentage reported.

The weighted means of 1.8% and 2.7% of total General Administration for the two Federal reporting subfunctions are clear indicators of the relatively low costs this aspect of administering the Medicaid program actually entails. Part of this may be attributed to the specific nature of these two subfunctional cost areas which lead to clearer, more succinct definitions but the indication is that current Federal reporting requirements do not place overwhelming burdens on the states.

State Internal Reporting. This subfunction consists of activities involved in the preparation and analysis of financial and other management reports for state purposes. Internal reporting accounted for a greater expenditure (\$1,528,093) than the combined total (\$288,506) of the two previous Federal reporting requirements. The difference, however, may not be as extreme as the numbers indicate. South Carolina reported internal reporting costs of \$1,220,797 for the quarter. That represents over 81% of the total cost for internal reporting submitted. It also represents 75.9% of South Carolina's entire General Administration costs for the quarter. As a result of this expenditure the mean cost for the fifteen reporting states was \$101,873 and the weighted mean percentage of General Administration was 23.8%. The unweighted mean is probably a closer approximation of the prevailing situation. The lowest reported cost was \$778 in Idaho while New Hampshire's cost of \$1,458 represented the smallest percentage (0.5%) of total administrative costs.

Planning and Policy. The fourth subfunctional area under General Administration consists of all planning and policy activities other than reimbursement. Twenty states reported quarterly costs of \$798,677, a mean of \$39,934. Pennsylvania (\$191,200) and North



Carolina (\$118,608) reported the highest costs. Colorado, Iowa, North Carolina, Pennsylvania and West Virginia reported costs which represented over 50% of their General Administration costs. Conversely, nine states reported costs representing less than 10% of General Administration. As a result the unweighted mean of 24.9% was nearly double the weighted mean of 12.5%. This occurred because Colorado (60.6%), North Carolina (86.6%), Iowa (54.6%) and West Virginia (59.0%) had high costs relative to their own General Administration expenditures thus driving up the unweighted mean, but these same costs were not large enough relative to all the costs in this subfunction to push the weight mean significantly higher.

Automated Data Processing. Costs for this subfunction are a total of all automated data processing costs associated with the preceding four subfunctions. ADP costs for the quarter were \$1,289,673 for the fifteen states reporting costs, a mean of \$85,978. South Carolina reported the highest cost \$329,169, followed by Alabama (\$260,331), Georgia (\$215,177) and New Hampshire (\$106,836). Alaska reported the lowest cost (\$207) and Pennsylvania was second lowest with \$3,836 in reported costs. In terms of percentages of General Administration, this yielded a range of 0.5% in Alaska to 66.0% in Florida. The unweighted and weighted means, however, were very close at 24.6% and 20.2% respectively.

Other General Administration. The final subfunction of General Administration is a "catch-all" category accounting for the largest proportion of cost in this function area. Costs allocated to this subcategory varied, depending upon the specificity of a state's accounting system and its compatibility with the Cost Matrix Classifications. Costs ranged from a low of \$6,935 in Iowa to a high of \$1,048,008 in New Jersey. The total cost reported by twenty states for Other was \$2,492,091 a mean of \$124,605. This yielded a weighted mean of 39.0% for Other Costs as a percentage of total General Administration. The unweighted mean was higher at 45.0%.



## Beneficiary Services

Beneficiary Services, the third functional area, was divided into four subcategories: Eligibility Determination, Eligibility Redetermination, Automated Data Processing (ADP) and Other Beneficiary Services. Actual costs reported for these subcategories are shown in Table E - 5 and these costs as a percentage of total Beneficiary Services costs are shown in Table E - 6. Twenty-two states provided subfunctional data for this area.

Eligibility Determination. The greatest proportion of resources spent in Beneficiary Services occurred in the first subcategory, Eligibility Determination. This area involves all activities associated with initial eligibility determination, excluding the cost of AFDC determinations. It was further broken down by category of eligibility. The more detailed breakdown is not included in this section but is reported in a subsequent analysis. North Carolina reported eligibility determination costs of over \$2 million. Virginia and Connecticut also reported determination costs in excess of one million dollars. The \$1.5 million reported by Virginia accounted for 88.1% of the state's total costs for beneficiary services, the highest reported. North Carolina's costs accounted for 87.6% of that state's total beneficiary services costs while the \$1.09 million reported by Connecticut represented 80.0% of the state's beneficiary services costs. Wyoming's cost of \$8,601 was by far the lowest reported. New Hampshire was next with a quarterly cost of \$55,719. Georgia's \$78,333 of reported eligibility determination costs made up the smallest percentage, 6.6% of total beneficiary services. Florida at 14.8% was next followed by Wyoming at 24.7%.

Eligibility Redetermination. This subfunctional area involves confirmation of income and resources, interviews with beneficiaries, etc. for individuals who have previously undergone an initial eligibility determination. Redetermination accounts for a smaller proportion of beneficiary services than the initial determination reported in the previous subfunction. In terms of gross dollars





TABLE E - 5  
SUBFUNCTIONAL COSTS FOR  
#3 BENEFICIARY SERVICES  
BY STATE

Subfunctions States	Eligibility Determination (\$)	Redetermination (\$)	ADP (\$)	Other Beneficiary Services (\$)	Total (\$)
Alabama	119,277	221,515	----	----	340,792
Alaska	----	----	2,338	----	2,338
Arkansas	287,438	21,389	----	130,784	439,611
Colorado	190,407	285,618	----	21,433	497,458
Connecticut	1,095,203	136,901	82,139	54,762	1,369,005
District of Columbia	492,601	----	----	545,577	1,038,178
Florida	194,418	380,837	----	738,611	1,313,866
Georgia	78,333	595,194	187,900	323,245	1,184,672
Idaho	465,125	----	----	----	465,125
Iowa	672,927	----	----	1,175,395	1,848,322
Louisiana	211,680	----	----	752,055	963,735
Massachusetts	297,152	916,121	----	----	1,213,273
New Hampshire	55,719	22,901	20,121	32,125	130,866
New Jersey	391,299	36,462	179,652	22,210	629,623
North Carolina	2,391,386	----	235,521	103,209	2,730,116
Pennsylvania	7,311,623	----	----	----	7,311,623
Puerto Rico	277,407	422,328	----	3,373	653,108
South Carolina	436,578	----	----	748,549	1,185,127
Tennessee	699,453	435,471	----	----	1,134,924
Virginia	1,516,406	----	181,130	23,116	1,720,652
West Virginia	483,483	----	----	----	483,483
Wyoming	8,601	13,757	----	12,443	34,801
Total	17,626,516	3,488,494	888,801	4,686,887	26,690,698
Mean	839,358	290,708	126,972	312,459	1,213,214





TABLE E - 6

SUBFUNCTIONS AS A PERCENTAGE OF  
FUNCTIONAL COSTS FOR #3 BENEFICIARY  
SERVICES BY STATE

States \ Subfunc- tions	Eligibility Determination (%)	Redetermination (%)	ADP (%)	Other Beni- ficiary Services (%)
Alabama	35.0	65.0	--	--
Alaska	--	--	100.0	--
Arkansas	65.4	4.9	--	29.7
Colorado	38.3	57.4	--	4.3
Connecticut	80.0	10.0	6.0	4.0
District of Columbia	47.4	--	--	52.6
Florida	14.8	29.0	--	56.2
Georgia	6.6	50.2	15.9	27.3
Idaho	100.0	--	--	--
Iowa	36.4	--	--	63.6
Louisiana	22.0	--	--	78.0
Massachusetts	24.5	75.5	--	--
New Hampshire	42.6	17.5	15.4	24.5
New Jersey	62.1	5.8	28.5	3.5
North Carolina	87.6	--	8.6	3.8
Pennsylvania	100.0	--	--	--
Puerto Rico	34.8	64.7	--	0.5
South Carolina	36.8	--	--	63.2
Tennessee	61.6	38.4	--	--
Virginia	88.1	--	10.5	1.3
W. Virginia	100.0	--	--	--
Wyoming	24.7	39.5	--	35.8
Unweighted Mean	52.8	38.2	26.4	29.9
Weighted Mean	66.0	13.1	3.3	17.6



our sample spent about \$14 million more for determination. The mean for determination is \$839,358 while the mean for redetermination is \$290,708. As a percentage of total Beneficiary Service costs, redetermination is less than a fifth of initial eligibility determination (13.1% vs. 66.0%).

Georgia reported redetermination costs of \$595,194. This high was followed by the \$422,328 reported by Puerto Rico and the \$221,515 recorded by Alabama. The rate for these two were also the highest percentages reported: 65% in Alabama and 64.7% in Puerto Rico. Arkansas reported redetermination as 4.9% of total costs for beneficiary services, the lowest rate reported, and Wyoming reported the lowest cost \$13,757.

ADP. Automated Data Processing associated with Eligibility Determination and Redetermination accounted for \$888,801 in the seven states reporting costs in this subfunction. That represents 3.3% of all reported Beneficiary Services Costs. North Carolina had the highest cost, \$235,521; Puerto Rico reported no costs for the quarter. ADP costs accounted for 28.5% of New Jersey's total cost for beneficiary services.

Other Beneficiary Services. The fourth subcategory is fairly broad and includes activities such as beneficiary hearings, correspondence with applicants and beneficiaries, publicity to potential applicants, etc. This broad scope is reflected in the mean cost of \$312,459. The cost for this subfunction was \$4.68 million or 17.6% of the area's total cost. The breadth of this subcategory is further illustrated by the high allocations for certain jurisdictions. Five states reported other costs that accounted for over 50% of their beneficiary services. Other costs actually ranged from \$3,373 (Puerto Rico) to \$752,055 (Louisiana).

#### Quality Control

Costs reported for the quality control function were divided according to the three segments of the Medicaid Quality Control Program: eligibility review, third party liability review, and



claims processing review. These costs are displayed in Table E -7 and Table E - 8 shows these expenditures as a percentage of total Quality Control costs. By far, the majority of the quality control costs were incurred in the eligibility review area. The \$1,082,154 spent during the quarter for eligibility review accounted for 77.7% of all Quality Control costs. Third party liability and claims processing review had costs which were quite close, \$150,654 for third party and \$159,537 for claims processing review, accounting for 10.8% and 11.5% of the total quality control. The mean costs for the three subfunctions were in approximately the same proportions as the percentages; eligibility review having a mean of \$67,635, third party liability a mean of \$12,555 and claims processing review a mean of \$13,295. Eighteen states provided subfunctional data for Quality Control.

Eligibility Review. Reported costs for eligibility review ranged from \$10,000 in Idaho up to \$167,431 in Massachusetts. South Carolina reported costs of \$165,225 for eligibility review which, as a percentage, accounted for 91.1% of the state's quality control expenditure. The lowest percentage reported was in Colorado. 36.4% of the state's quality control expenditure was consumed by eligibility review.

Third Party Liability Review. Alabama reported costs of \$48,961, the highest for third party review. The lowest cost was reported by New Hampshire (\$3,777). The 50.0% of total Quality Control reported by Tennessee was the highest percentage for third party liability recorded. South Carolina reported costs of \$8,025 for a 4.4% mark, the lowest percentage of total quality control reported.

Claims Processing Review. Five states, Georgia, Idaho, New Hampshire, South Carolina and Tennessee reported that their costs for claims processing review were the same as their costs for third party liability review. This is quite interesting because the totals for these two subfunctions are different by only \$8,883 on a combined total cost of \$310,191. This would seem to indicate



TABLE E - 7  
SUBFUNCTIONAL COSTS FOR  
#4 QUALITY CONTROL  
BY STATE

Subfunc- tions States	Eligibility Review (\$)	Third Party Liability Review (\$)	Claims Pro- cessing Review (\$)	Total (\$)
Alabama	50,259	48,961	--	99,220
Alaska	23,838	--	--	23,838
Arkansas	39,987	--	--	39,987
Colorado	13,155	5,281	17,684	36,120
Connecticut	84,595	16,919	11,280	112,794
Georgia	65,317	39,070	39,070	143,458
Idaho	10,000	5,000	5,000	20,000
Iowa	42,434	4,546	12,404	59,384
Louisiana	29,771	6,841	10,966	47,578
Massachusetts	167,431	3,918	--	171,349
New Hampshire	22,206	3,777	3,777	29,760
New Jersey	38,392	--	28,273	66,665
Pennsylvania	200,567	--	--	200,567
South Carolina	165,225	8,025	8,025	181,275
Tennessee	--	4,077	4,077	8,154
Virginia	--	--	9,190	9,190
West Virginia	114,639	--	--	114,639
Wyoming	14,338	4,238	9,791	28,367
Total	1,082,154	150,654	159,537	1,392,345
Mean	67,635	12,555	13,295	77,454







TABLE E - 8  
SUBFUNCTIONS AS A PERCENTAGE  
OF FUNCTIONAL COST FOR #4 QUALITY  
CONTROL BY STATE

Subfunctions States	Eligibility Review (%)	3rd Party Liability Review (%)	Claims Processing Review (%)
Alabama	50.7	49.3	----
Alaska	100.0	----	----
Arkansas	100.0	----	----
Colorado	36.4	14.6	49.0
Connecticut	75.0	15.0	10.0
Georgia	45.5	27.2	27.2
Idaho	50.0	25.0	25.0
Iowa	71.5	7.7	20.8
Louisiana	62.6	14.4	23.0
Massachusetts	97.7	2.3	----
N. Hampshire	74.6	12.7	12.7
N. Jersey	57.6	----	42.4
Pennsylvania	100.0	----	----
S. Carolina	91.1	4.4	4.4
Tennessee	----	50.0	50.0
Virginia	----	----	100.0
West Virginia	100.0	----	----
Wyoming	50.5	14.9	34.5
TOTAL	1163.2	237.5	399.0
Unweighted Mean	72.7	19.8	33.3
Weighted Mean	77.7	10.8	11.5



a close relationship between these two subfunctions of Quality Control.

The high cost for claims processing review was \$39,070 reported in Georgia. The low again was reported by New Hampshire. Tennessee's rate of 50% was the highest reported and 4.4% for South Carolina was the lowest percentage of quality control expended on claims processing review.

#### EPSDT

The fifth functional area was divided into four subfunctions; Informing & Notification, Outreach, Case Management and General EPSDT Administration. Nine states provided data at the subfunctional level. Cost data is presented on Table E - 9; Table E - 10 displays the reported costs by subfunctions as a percentage of the total state EPSDT cost.

Informing & Notification. This subfunction consists of the processing of eligibility files to determine which children are due for a periodic screen, mailing notifications and printing materials on EPSDT. Three states provided data under this category; Colorado \$520, Wyoming \$17,155 and Massachusetts \$59,384. This subfunction was further divided between automated costs and manual costs. Only Wyoming provided data at this level, reporting that all its expenditures were manual charges.

Outreach. This subfunction captures the cost of visiting and telephoning families to encourage participation in EPSDT. It also includes informing families about health care services and counseling them on the importance of following up findings of the health assessment. Six states reported outreach costs. Pennsylvania's costs amounted to \$554,279 or 50.8% of the state's EPSDT expenditure. Colorado reported the second highest costs \$204,729 or 49.1% of the state's EPSDT costs. In total, the six states reported costs of \$875,509 for a mean cost of \$145,918. Outreach costs made up 35.4% of the total EPSDT costs reported.



Case Management. This subfunction consists of costs incurred to check on treatment rendered for conditions found, scheduling appointments for beneficiaries, and arranging transportation. Eight states reported costs for these activities amounting to \$852,363 or 34.5% of the entire cost reported for EPSDT. Georgia reported the highest costs, \$273,777 (83.4% of the state's EPSDT total) while Virginia reported the lowest (\$1,960, 37.2% of EPSDT for the state). Alaska and Massachusetts had the highest and lowest percentages of total EPSDT costs reported. They were 84.0% and 30.8% respectively.

Case management, like Informing & Notification was further broken down into automated and manual costs. Five states provided data at this level, four reporting manual costs and one reporting automated costs. The manual costs ranged from a low of \$23,171 to \$273,777. The reported cost for the automated case management was \$1,960.

General EPSDT Administration. The final EPSDT subfunction captures all data not specifically allocated to one of the other subfunctions. The activities involved include provider enrollment, planning for EPSDT, development of screening package and liaison with other state and local agencies on EPSDT. A mean cost for general EPSDT administration of \$74,159 was calculated on the basis of the nine states that reported costs of \$667,432. Of this total, \$536,382 were expended by Pennsylvania. Without the Pennsylvania costs the total reported for general administration was \$131,050, resulting in a mean of \$16,381. Following Pennsylvania, Georgia had the highest cost (\$54,375) Wyoming (\$2,036) and Virginia (\$3,301) reported the lowest costs received. Virginia's cost (\$3,301) as a percentage of total EPSDT cost was the highest reported (62.7%). Pennsylvania was next at 49.2%. Colorado's rate of 1.6% was the lowest reported, followed by 4.3% in Wyoming.



TABLE E - 9  
SUBFUNCTIONAL COSTS FOR  
45 EPSDT BY STATE

Subfunctions States	Informing and Notification (\$)	Outreach (\$)	Case Manage- ment (\$)	Gen. EPSDT Admin. (\$)	Total (\$)
Alaska	—	—	120,257	22,954	143,211
Colorado	520	204,729	205,219	6,744	417,212
Connecticut	—	45,110	162,664	22,555	230,329
Georgia	—	—	273,777	54,375	328,152
Massachusetts	59,384	59,384	59,385	14,870	193,023
N. Hampshire	—	6,937	5,930	4,215	17,082
Pennsylvania	—	554,279	—	536,382	1,090,661
Virginia	—	—	1,960	3,301	5,261
Wyoming	17,155	5,070	23,171	2,036	47,432
Total	77,059	875,509	852,363	667,432	2,472,363
Mean	25,686	145,918	106,545	74,159	274,707





TABLE E - 10  
SUBFUNCTIONS AS A PERCENTAGE  
OF FUNCTIONAL COSTS FOR #5 EPSDT  
BY STATE

Subfunctions States	Informing and Notification (%)	Outreach (%)	Case Manage- ment (%)	Gen. EPSDT Admin. (%)
Alaska	----	----	84.0	16.0
Colorado	0.1	49.1	49.2	1.6
Connecticut	----	19.6	70.6	9.8
Georgia	----	----	83.4	16.6
Massachusetts	30.8	30.8	30.8	7.6
N. Hampshire	----	40.6	34.7	24.7
Pennsylvania	----	50.8	----	49.2
Virginia	----	----	37.2	62.7
Wyoming	36.2	10.7	48.8	4.3
Unweighted Mean	22.4	33.6	54.8	21.4
Weighted Mean	3.1	35.4	34.5	27.0



## Provider Services

Administrative activities involved in provider services include provider enrollment, provider relations, provider education, and handling of provider inquiries. The costs incurred in these activities are divided according to provider type or services provided. The costs for the ten subfunctional areas of provider services in each state are shown in Table E - 11 and the percentage of total Provider Services costs for each subfunctional area are presented in Table E - 12. The largest proportion of provider services administrative costs was allocated to the subfunctional areas, long-term care facilities certification, and long-term care facilities medical reviews and independent practitioner reviews (MR/IPR) Certification consists of state certification of Skilled Nursing Facilities and Intermediate Care Facilities and accounted for 39.4% of total provider services costs; MR/IPR costs accounted for 16.7%. Six states (Alaska, Florida, Massachusetts, South Carolina, Tennessee and West Virginia) spent more than 50% of total provider services costs for long-term care certification.

Physician. Total reported costs for provider services to physicians were \$531,487 for eighteen states, a mean of \$29,527. Pennsylvania had the largest expenditure in this subfunction, \$134,764. Connecticut had the second highest reported physician costs at \$93,120. Wyoming had the lowest reported cost, \$975; Idaho was next with \$2,040. As a percentage of total provider services costs, Idaho's expenditure was the second highest at 23.6% and Wyoming's was highest, 28.2% Florida had the lowest rate, 0.7% as a result of its \$7,459 expenditure.

Pharmacy. Seventeen states reported costs amounting to \$353,548 for provider services to pharmacies. This resulted in a mean state expenditure of \$20,797. Five states had costs above the mean, the highest being Connecticut with a quarterly cost of \$54,322. New Jersey was next at \$48,511. Idaho reported the lowest cost for provider services to pharmacies, \$250. The \$4,280 expenditure in West Virginia was the second smallest. The unweighted mean for pharmacy costs was 5.6% of total provider services costs. Louisiana had the highest



rate, 13.1% and Pennsylvania, the lowest, 1.3%. The weighted mean was 4.6%.

HMO. Nine states reported HMO provider services costs. They totaled \$110,050 and had a mean of \$13,756. New Jersey (\$20,870) and Florida (\$18,896) had the highest costs while the District of Columbia reported a low of \$587. The weighted mean for HMO provider services costs was 1.4% of total provider services costs, the unweighted, 2.5%. These rates ranged from 0.4% (District of Columbia) up to 7.9% (Louisiana).

Hospital. Costs reported for provider services to hospitals totaled \$696,028. The highest reported cost was \$147,683 in Connecticut and the lowest was \$151 in Wyoming. The mean cost was \$40,943. As a percentage of total provider services, hospital costs accounted for 9.0%. The lowest percentage was from Florida, 0.7% and the highest was 65.9% in the District of Columbia.

LTC: Certification. Seventeen states reported certification costs totaling \$3,050,333. The range of costs for certification began with \$559 in Wyoming and went to \$748,908 in Florida. The mean for certification was \$179,431. Five states excluded it. Certification of long-term care facilities consumed 39.4% of the entire provider services expenditure. The highest rate was 67.5% in South Carolina while the lowest was 8.0% in New Jersey.

LTC: MR/IPR. Costs for medical review and independent practitioners reviews ranged from \$112 in Wyoming up to \$383,150 in New Jersey and totaled \$1,291,724. The mean for the fourteen reporting states was \$92,266. The unweighted mean for MR/IPR as a percentage of total provider services costs was 16.1%. The actual range extends from 0.1% in the District of Columbia to 46.3% in New Jersey. In all, six states exceeded both of the means.

LTC: Other. This subfunction accounts for 7.8% of all provider services expenditures. The largest expenditure being





SUBFUNCTIONAL COSTS FOR  
#6 PROVIDER SERVICES  
BY STATE

Subfunc- tions States	Physician (\$)	Pharmacy (\$)	HMO (\$)	Hospital (\$)	LTC: Cert. (\$)	LTC: MR/IPR (\$)	LTC: other (\$)	Dental (\$)	Other (\$)	ADP (\$)	Total (\$)
Alabama	10,497	40,411	---	14,490	---	72,531	19,574	---	98,465	---	255,968
Alaska	---	---	---	---	25,326	---	---	19,039	---	1,841	46,206
Arkansas	15,388	6,682	---	---	143,672	---	108,850	---	171,947	---	446,539
Colorado	64,610	34,740	15,122	18,017	148,719	88,081	32,916	14,713	20,105	10,510	447,533
Connecticut	93,120	54,322	11,638	147,683	130,471	38,799	11,638	15,520	31,040	15,520	549,751
District of Columbia	23,155	7,620	587	96,724	---	150	7,328	1,758	9,379	---	146,701
Florida	7,459	47,804	18,896	3,113	748,908	204,957	10,405	19,459	---	---	1,061,001
Georgia	24,677	15,963	---	115,850	190,479	12,481	9,925	10,150	29,034	49,012	457,571
Idaho	2,040	250	---	3,015	3,150	---	---	200	---	---	8,655
Iowa	---	---	---	---	28,033	5,253	28,035	---	477	---	61,798
Louisiana	6,911	15,048	9,158	6,276	24,697	---	---	17,886	22,314	12,991	115,281
Massachusetts	6,400	12,844	16,493	38,750	330,748	97,607	19,380	7,901	24,545	---	554,668
New Hampshire	13,044	7,343	---	3,364	46,447	7,050	10,934	7,699	4,994	1,780	102,655
New Jersey	14,652	48,511	20,870	61,071	66,029	383,150	164,271	3,516	64,991	---	827,061
Pennsylvania	134,764	20,094	17,286	134,764	610,467	240,546	140,319	134,764	134,764	---	1,567,768
South Carolina	10,449	9,524	---	9,524	155,514	---	24,520	10,449	10,449	---	230,429
Tennessee	46,740	17,018	---	5,809	283,114	50,706	3,924	9,604	19,940	---	436,875
Virginia	32,146	11,094	---	12,965	---	90,301	11,585	49,337	7,030	22,611	237,069
West Virginia	24,460	4,280	---	24,460	113,980	---	---	4,280	20,803	---	192,263
Wyoming	975	---	---	151	559	112	759	392	509	---	3,457
Total	531,487	353,548	110,050	696,926	4050,333	4,291,724	604,363	326,667	670,786	114,265	7,749,249
Mean	29,527	20,797	13,756	40,943	179,431	92,266	37,773	19,216	39,458	16,324	387,462





TABLE E-12

SUBFUNCTIONS AS A PERCENTAGE OF FUNCTIONAL COSTS  
FOR #6 PROVIDER SERVICES BY STATE

SUBFUNCTIONS STATES	Physician (%)	Pharmacy (%)	IPD (%)	Hospital (%)	LHC: Cert. (%)	LHC: MF/IPR (%)	LHC Other (%)	Dental (%)	Other (%)	ADP (%)
Alabama	4.1	15.8	--	5.7	--	28.3	7.6	--	36.5	--
Alaska	--	--	--	--	54.8	--	--	41.2	--	4.0
Arkansas	3.4	1.5	--	--	32.2	--	24.4	--	38.5	--
Colorado	14.4	7.8	3.4	4.0	33.2	19.7	7.4	3.3	4.5	2.3
Connecticut	16.9	9.9	2.1	26.9	23.7	7.1	2.1	2.8	5.6	2.8
Dist. of Columbia	15.8	5.2	0.4	65.9	--	0.1	5.0	1.2	6.4	--
Florida	0.7	4.5	1.8	0.3	70.6	19.3	1.0	1.8	--	--
Georgia	5.4	3.5	--	25.3	41.6	2.7	2.2	2.2	6.3	10.7
Idaho	23.6	2.9	--	34.8	36.4	--	--	2.3	--	--
Iowa	--	--	--	--	45.4	8.5	45.4	--	.8	--
Louisiana	6.0	13.1	7.9	5.4	21.4	--	--	15.5	19.4	11.3
Massachusetts	1.2	2.3	3.0	7.0	59.6	17.6	3.5	1.4	4.4	--
New Hampshire	12.7	7.2	--	3.3	45.2	6.9	10.7	7.5	4.9	1.7
New Jersey	1.8	5.9	2.5	7.4	8.0	46.3	19.9	0.4	7.9	--
Pennsylvania	8.6	1.3	1.1	8.6	38.9	15.3	9.0	8.6	8.6	--
South Carolina	4.5	4.1	--	4.1	67.5	--	10.6	4.5	4.5	--
Tennessee	10.7	3.9	--	1.3	64.9	11.6	0.9	2.2	4.6	--
Virginia	13.6	4.7	--	5.5	--	38.1	4.9	20.8	3.0	9.5
West Virginia	12.7	2.2	--	12.7	59.3	--	--	2.2	10.8	--
Wyoming	28.2	--	--	4.4	16.2	3.2	22.0	11.3	14.7	--
Unweighted Mean	10.2	5.6	2.8	13.1	42.3	16.1	11.0	7.6	10.8	6.0
Weighted Mean	6.9	4.6	1.4	9.0	39.4	16.7	7.8	4.2	8.7	1.5



the \$140,319 spent by Pennsylvania, the smallest was the \$759 spent in Wyoming. The total quarterly cost for LTC: Other was \$604,363, a mean of \$37,773 for the sixteen reporting states.

Dental. Pennsylvania had the greatest expenditure (\$134,764) for dental provider services. Virginia was next with a quarterly cost of \$49,337. \$200 in Idaho was the lowest. The total cost for dental was \$326,667 or 4.2% of the total cost for provider services. Alaska's costs of \$19,039 account for 41.2% of the state's provider services costs, the highest rate reported, New Jersey's \$3,516 accounted for 0.4% of that state's provider services costs.

Other. Again the "catch-all" nature of the other category is displayed by the reporting of costs for provider services. This subfunction was fourth largest in this functional area accounting for 8.7% of the total expenditure or \$670,786. Two states, Alabama and Arkansas reported that 38.5% of their provider services expenditures fall under the Other heading. Pennsylvania spent the same amount for Other (\$134,764) as was spent for Dental. The same was true in South Carolina. Iowa reported the smallest expenditure \$477 or 0.8% of the state's total provider services costs.

ADP. Seven states reported ADP costs associated with provider services. These costs totaled \$114,265 or 1.5% of total costs for the functional area. Georgia's cost was \$49,012, the highest reported.

### Claims Processing

The seventh functional area, Claims Processing, was divided into two subfunctions, Developmental and Operating. The subfunctions were further divided between costs incurred in-house and costs incurred through the employment of fiscal agents. Table E - 13 displays the actual costs for these categories reported by the states. Table E - 14 shows the cost data for each category as a percentage of the total claims processing charges for the



quarter. It should be noted that Connecticut did not report a breakdown of its \$108,486 operating cost. As a result, claims processing costs for Connecticut are displayed in the tables but are not used in the computing of the means or the total of totals. Connecticut is also excluded from any descriptive narrative concerning these tables.

Claims Processing was the target of the study's most detailed data collection effort. In most instances, the actual cost data is suspect below the "Total" level of reporting (the far right column of Table E - 11). This is primarily due to the difficulties states had in distinguishing developmental costs from operating costs. As this was the area of most concentrated data collection, the study sought a further breakdown of the in-house and fiscal agent costs. These breakdowns will be delineated in the following discussions.

Developmental Costs. Activities, whether performed in-house or through contractors, involved with the creation, enforcement and preparation of a state's capability to process claims were defined as developmental costs. They were limited to Medicaid related costs in accordance with the state's allocation formula. As the table shows, five states reported only in-house costs, two had only fiscal agent costs and three recorded costs of both types. Pennsylvania, Massachusetts, Georgia and Maryland each reported in-house developmental costs in excess of \$180,000. The mean for in-house costs was \$127,659, based on a quarterly total of \$1,021,274 and eight reporting states.

As a percentage of total claims processing costs, in-house developmental costs accounted for 4.3% Maryland (18.8%), Georgia (14.1%) and Pennsylvania (11.0%) were all significantly higher than this weighted mean, being closer to the unweighted mean of 9.0%. The mean for developmental fiscal agent costs was \$155,967 based on five states reporting expenditures of \$779,834. Pennsylvania (\$305,460) and Colorado (\$272,998) had the majority of the costs in this subcategory. Fiscal agent costs took up an





even smaller percentage (3.2% vs. 4.3%) of the total claims processing than did in-house costs. As a subfunction, Developmental Costs accounted for very little of the claims processing costs for the quarter, 7.5% (weighted mean). Three states, Colorado (37.2%), Pennsylvania (22.6%), and South Carolina (21.2%) were the only ones to vary significantly from this mark.

As noted earlier, a further breakdown of in-house and fiscal agent costs were sought under Developmental Costs (In-house/Fiscal Agent). Data was collected for hardware (developmental share), software development, site preparation and information systems planning. This last area included the cost of conducting feasibility studies, cost/benefit analyses, and other studies which could lead to the development or improvement of any manual or automated information system.

Three states reported hardware costs. Pennsylvania and South Carolina reported in-house hardware costs of \$932 and \$903 respectively. South Carolina also reported contracted hardware costs as did Virginia. Virginia's costs were \$26,364 while South Carolina reported costs of \$20,644.

The following are examples of states incurring sizable expenses developing claims processing systems (either in the planning or implementation stage). \$272,998 of Colorado's developmental costs (\$324,580) was for contracted software development. Of Maryland's \$183,703 in-house developmental costs, \$175,175 went for software development. In Pennsylvania, the vast majority of the \$596,850 developmental expenditure, incurred both in-house and through contracts, was related to information systems planning. This cost, \$574,999 was about evenly split between contracted costs and in-house costs (\$292,921 vs. \$282,078). South Carolina reported that \$50,283 of its in-house developmental costs of \$51,186 was for software development. \$107,616 of the \$128,280 expended for contracted development costs also went for software development. All of these expenditures are of a non-recurring nature and act to distort the total costs of claims processing for these states.





It should be noted that seven of the eight states reporting developmental costs reported software development costs.

Operating Costs. Activities involved in the processing of provider claims against the Medicaid program, whether performed by a fiscal agent or in-house, were considered operating costs. Twenty-two states provided operating cost data, five reporting in-house costs only, seven reporting fiscal agent costs only and ten reporting costs in each subcategory. Twelve of these states reported no developmental costs and, therefore, showed 100% of their claims processing costs as operating costs. For all reporting states total operating costs made up 91.1% (weighted mean) of the claims processing expenditure.

The in-house operating costs for the quarter were reported at \$5,628,914 which yielded a mean of \$375,261. Massachusetts (\$2,117,477) and Georgia (\$1,144,422) reported the majority of the in-house costs. Three jurisdictions, the District of Columbia, New Hampshire and Puerto Rico, reported 100.0% of their claims processing costs as in-house operating costs.

Operating costs incurred with fiscal agents amounted to \$16,264,787, yielding a mean of \$956,752. This total cost represented 67.7% of all claims processing expenditures reported. Six states reported 100.0% of their claims procession costs were incurred in this category. Florida was one of the six states and had a \$4.17 million expenditure for the quarter, the highest reported. Five other states also reported quarterly costs in excess of one million dollars. These states, New Jersey, Pennsylvania, Louisiana, Massachusetts and Alabama, ranged in cost from \$1.8 million to \$1.0 million.

Under the operating cost subcategories of In-house and Fiscal Agent additional data was collected for hardware costs, maintenance of software (including salaries and royalties), data entry, computer operations and manual claims processing. This final type includes the attendant costs involved in error adjudication, bill review, bill adjustment and the handling of any manually processed claim types.



TABLE E-13

SUBFUNCTIONAL COSTS FOR #7  
CLAIMS PROCESSING BY STATE

Subfunctions States	Developmental		Total** Developmental (\$)	Operating		Total Operating (\$)	Total In-House (\$)	Total Fiscal Agent (\$)	Total In-House (\$)	Total Fiscal Agent (\$)	TOTAL
	In-House (\$)	Fiscal Agent (\$)		In-House (\$)	Fiscal Agent (\$)						
Alabama						1,028,228		1,028,228			1,028,228
Alaska	7,362		7,362	100,294					107,656		107,656
Arkansas					514,950	514,950		514,950			514,950
Colorado	51,582	272,998	324,580	54,475	493,268	547,743		766,266	106,057		872,323
Connecticut*	145,293	78,811	224,104	N.A.	N.A.	108,486		N.A.	N.A.		332,590
Dist. of Columbia				381,294		381,294			381,294		381,294
Florida					4,171,508	4,171,508		4,171,508			4,171,508
Georgia	188,991		188,991	1,144,422	6,375	1,150,797		6,375	1,333,413		1,339,788
Idaho	5,600		5,600	11,885	187,500	199,385		187,500	17,485		204,985
Iowa				1,193	578,674	579,867		578,674	1,193		579,867
Louisiana					1,487,058	1,487,058		1,487,058			1,487,058
Maryland	183,703		183,703	795,281		795,281			978,984		978,984
Massachusetts	241,460		241,460	2,117,477	1,178,472	3,295,949			2,358,937		3,537,409
New Hampshire				190,837		190,837			190,837		190,837
New Jersey				91,006	1,847,075	1,938,081		1,847,075	91,006		1,938,081
North Carolina				51,727	966,374	1,018,101		966,374	51,727		1,018,101
Pennsylvania	291,390	305,460	596,850	353,112	1,689,375	2,042,487		1,994,835	644,502		2,639,337
Puerto Rico				16,996		16,996			16,996		16,996
South Carolina	51,186	128,280	179,466	282,051	391,000	673,051		519,280	333,237		852,517
Tennessee					778,821	778,821		778,821			778,821
Virginia		68,867	68,867	36,864	537,032	573,896		605,899	36,864		642,763
West Virginia		4,229	4,229		383,278	383,278		387,507			387,507
Wyoming					25,799	25,799		25,799			25,799
Total	1,021,274	779,834	1,801,108**	5,628,914	16,264,787	21,893,701		17,044,621**	6,650,188		24,027,399
Mean	127,659	155,967	180,111	375,261	956,752	951,900		1,002,625	443,346		1,044,670

\*Connecticut did not breakdown operating cost, therefore the state's data are reported but not limited in any total of Totals.

\*\*Connecticut data are not included in any total of Totals.

N.A. Not Available to NFAS



TABLE E - 14

SUBFUNCTIONS AS A PERCENTAGE OF FUNCTIONAL COST  
FOR #7 CLAIMS PROCESSING BY STATE

Subfunctions	Developmental		Total Development (%)	Operating		Total Operating (%)	Total In-House (%)	Total Fiscal Agent (%)
	In-House (%)	Fiscal Agent (%)		In-House (%)	Fiscal Agent (%)			
Alabama					100.0	100.0		100.0
Alaska	6.3		6.3	93.2		93.2	100.0	
Arizona					100.0	100.0		100.0
Arkansas	5.9	31.3	37.2	6.2	56.5	62.7	12.2	87.8
Connecticut*	43.7	23.7	67.4	N.A.	N.A.	32.6	N.A.	N.A.
Columbia				100.0		100.0	100.0	
Delaware					100.0	100.0		100.0
District of Columbia	14.1		14.1	35.4	0.5	85.9	99.5	0.5
Florida	2.7		2.7	5.8	91.5	97.3	8.5	91.5
Georgia				0.2	99.8	100.0	0.2	99.8
Hawaii					100.0	100.0		100.0
Idaho	18.8		18.8	81.2		81.2	100.0	
Illinois	6.8		6.8	59.9	33.3	93.2	66.7	33.3
Indiana				100.0		100.0	100.0	
Iowa				4.7	95.3	100.0	4.7	95.3
Kansas				5.1	94.9	100.0	5.1	94.9
Kentucky	11.0	11.6	22.6	13.4	64.0	77.4	24.4	75.6
Louisiana				100.0		100.0	100.0	
Maine	6.1	15.1	21.2	32.9	46.0	78.8	38.9	61.1
Maryland					100.0	100.0		100.0
Massachusetts		10.7	10.7	5.7	83.6	89.3	5.7	94.3
Michigan		1.1	1.1		98.9	98.9		100.0
Minnesota					100.0	100.0		100.0
Mississippi								
Missouri								
Montana								
Nebraska								
Nevada								
New Hampshire								
New Jersey								
New Mexico								
New York								
North Carolina								
North Dakota								
Ohio								
Oklahoma								
Oregon								
Pennsylvania								
Rhode Island								
South Carolina								
South Dakota								
Tennessee								
Texas								
Utah								
Vermont								
Virginia								
Washington								
West Virginia								
Wisconsin								
Wyoming								
Unweighted Mean*	4.3	3.2	7.5	23.4	67.7	91.1	27.7	71.0

Connecticut data is not included in means.

\* Not Available to NIAS.





Florida, of the ten states reporting operating costs for hardware, had the highest costs for the period, \$944,634. New Hampshire showed the lowest cost , \$1,080. The six states reporting in-house hardware costs showed on the average substantially lower costs (\$23,119 in-house vs. \$350,217 fiscal agents) than the figures for contracted costs.

Five states reported in-house maintenance costs while contracted maintenance costs were reported in six states. Massachusetts reported \$117 for in-house maintenance and \$1,178,472 for fiscal agent costs. Florida, again, incurred the highest costs, \$1,323,918, through its contractual arrangements. Virginia's fiscal agent costs were the lowest reported (\$15,832). New Hampshire (in-house) had the lowest costs (\$4,868).

Data entry costs were reported by fourteen states, seven in-house, six contracted, and one combination. Florida (contracted) for the third time under operating costs showed the largest expenditure \$1,471,329. Arkansas reported the lowest contracted costs \$76,973. High cost for in-house was reported by Georgia \$379,461 and the low of \$2,885 was reported by Idaho.

Of the four states reporting in-house computer operation costs Massachusetts reported the highest expenditure, \$1,355,076. Idaho's costs were lowest at \$9,000. Florida's cost of \$431,624 was the highest among the five contracting states. The lowest cost was Tennessee's figure of \$4,206. Three states report both in-house and contracted costs. Pennsylvania spent the bulk of its computer operation dollars through its contracts (\$1,563,848 vs. \$39,682). Georgia was the opposite spending only \$6,375 through contracts and \$231,077 in-house for computer operation. The third state, Colorado, distributed its computer operation costs evenly, \$28,006 in-house vs. \$24,372 for fiscal agent costs.

Arkansas and Tennessee were the only states to report manual claims processing costs solely through contract. Three states, Colorado, New Jersey and Virginia reported manual costs both in-house and contracted. New Jersey combined costs of \$1,358,708 for manual claims processing were the highest reported. Eleven states reported costs for in-house manual claims processing.





Georgia reported the highest cost (\$493,769).

### Surveillance and Utilization Review

Surveillance and Utilization Review (SUR), the eighth functional area was divided into four subcategories: Prior Approval, Professional Pre-Payment Review, Post-Payment Review, and Automated Data Processing. This area includes the agency's efforts to detect possible fraud but does not include field investigation or prosecution. Actual costs for the subcategories are shown in Table E - 15, and percentages of functional costs represented by these figures are shown in Table E - 16.

Prior Approval. Sixteen states reported costs for Prior Approval. More administrative dollars were spent for Prior Approval than any of the other SUR subfunctions. These costs consisted of staff time spent making determinations when approval was required prior to utilization of service. New Jersey reported by far the highest Prior Approval costs, \$794,586. This accounted for over half of the Prior Approval costs reported and 94.4% of New Jersey's SUR expenditures. Wyoming had the lowest reported cost (\$1,209). Alaska, Arkansas and Puerto Rico spent 100.0% of their SUR costs on Prior Approval, while Alabama, Connecticut, Louisiana, Pennsylvania and Virginia reported no expenditures in this subfunctional area.

Professional Pre-Payment Review. This subcategory of SUR consists of all activities involved in forwarding claims to medical professionals who determine the appropriateness of the medical practice or services. Twelve states reported costs for this area. \$86,980 was spent in Massachusetts during the study period for this type of review, the highest cost reported. Wyoming reported the highest percentage of the functional area costs (52.4%). Iowa's expenditure of \$114 for professional pre-payment review was the smallest reported and had a correspondingly low percentage of the functional area cost. Eight states reported no costs in this subfunctional area.



TABLE E - 15

SUBFUNCTIONAL COSTS FOR #8 S/UR  
BY STATE

Subfunc- tions States	Prior Approval (\$)	Profess. Pre-Payment Review (\$)	Post- Payment Review (\$)	ADP (\$)	Total (\$)
Alabama	--	--	45,077	--	45,077
Alaska	32,772	--	--	--	32,772
Arkansas	60,276	--	--	--	60,276
Colorado	220,026	23,090	111,136	4,514	358,766
Connecticut	--	12,500	55,990	--	68,490
Dist. Columbia	1,355	--	60,980	5,420	67,755
Florida	14,389	67,330	66,541	--	148,261
Georgia	237,664	4,348	87,230	40,682	369,924
Idaho	2,800	7,600	11,200	--	21,600
Iowa	1,372	114	2,760	--	4,246
Louisiana	--	--	22,572	77,943	100,515
Maryland	94,121	23,734	19,738	--	137,593
Massachusetts	55,161	86,980	99,730	--	241,871
New Hampshire	7,896	2,423	2,423	15,661	28,403
New Jersey	794,586	5,862	41,684	--	842,132
Pennsylvania	--	--	486,554	--	486,554
Puerto Rico	6,125	--	--	--	6,125
South Carolina	28,466	32,479	129,832	--	190,777
Tennessee	8,466	33,651	16,875	--	58,992
Virginia	--	--	--	71,368	71,368
Wyoming	1,209	6,684	4,851	--	12,744
Total	1,566,684	306,796	1,265,173	215,588	33,354,241
Mean	97,918	23,600	74,422	35,931	159,726



TABLE E-16

SUBFUNCTIONS AS A PERCENTAGE OF  
FUNCTIONAL COST FOR #8 S/UR BY STATE

Subfunctions States	Prior Approval (%)	Profess. Pre-Payment Review (%)	Post- Payment Review (%)	ADP (%)
Alabama	--	--	100.0	--
Alaska	100.0	--	--	--
Arkansas	100.0	--	--	--
Colorado	61.3	6.4	31.0	1.3
Connecticut	--	18.3	81.7	--
Dist. Columbia	2.0	--	90.0	8.0
Florida	9.7	45.4	44.9	--
Georgia	64.2	1.2	23.6	11.0
Idaho	13.0	35.2	51.8	--
Iowa	32.3	2.7	65.0	--
Louisiana	--	--	22.5	77.5
Maryland	68.4	17.2	14.3	--
Massachusetts	22.8	36.0	41.2	--
New Hampshire	27.8	8.5	8.5	55.1
New Jersey	94.4	0.7	4.9	--
Pennsylvania	--	--	100.0	--
Puerto Rico	100.0	--	--	--
South Carolina	14.9	17.0	68.1	--
Tennessee	14.4	57.0	28.6	--
Virginia	--	--	--	100.0
Wyoming	9.5	52.4	38.1	--
Unweighted Mean	45.9	22.9	47.9	42.1
Weighted Mean	37.8	7.4	30.5	5.2





Post-Payment Review. Seventeen states reported costs for Post-Payment Review, as for the Prior Approval area. In terms of cost Post-Payment was a close second to Prior Approval. Post-Payment consists of staff time spent in analyzing Post-Payment Review reports for patterns of improper utilization or other possible improprieties. Pennsylvania's \$486,554, was the highest cost reported and accounts for 100.0% of the state's functional area costs. South Carolina and Colorado also reported large expenditures for this type of review (\$129,832 and \$111,136 respectively). Alabama reported that 100.0% of its functional area expenditures were in the Post-Payment Review subfunction.

The lowest reported cost was New Hampshire's \$2,423. The lowest percentage of functional area cost was 0% reported by four states.

ADP. SUR ADP costs were the lowest reported for the eight functional area and only six states reported costs in this subfunction. Louisiana had the highest cost \$77,943 and a high percentage of 77.5%. Virginia reported that 100.0% of its functional area costs fell within this subfunction. Fifteen states which reported SUR data recorded no expenditures in this subfunctional area.

A final note on SUR should be added. Three of the twenty states that provided SUR data had costs in all subfunctional categories. Nine states reported costs in three categories, New Jersey having a total cost of \$842,132 and six states reported incurring costs in one subfunctional area only.

#### Payment Recovery

The ninth functional area, Payment Recovery, collected data related to identifying liabilities outside of Medicaid and making collections. It also captured data concerning activities related to collection from providers who have been overpaid. Consistent with this data collection effort, Payment Recovery was divided into two subfunctional areas: Third-Party Recovery





TABLE E-17

SUBFUNCTIONAL COSTS FOR #9  
PAYMENT RECOVERY BY STATE

Subfunctions States	Third- Party Recovery (\$)	Provider Recovery (\$)	Total (\$)
Alabama	11,800	4,172	15,972
Alaska	7,609	--	7,609
Colorado	25,982	16,096	42,078
Connecticut	--	23,813	23,813
Dist. Columbia	160,494	--	160,494
Florida	18,650	--	18,650
Georgia	116,891	42,629	159,520
Iowa	7,755	3,453	11,208
Louisiana	7,795	27,026	34,821
New Hampshire	4,057	--	4,057
New Jersey	108,633	--	108,633
North Carolina	22,434	--	22,434
Pennsylvania	183,442	--	183,442
South Carolina	10,564	--	10,564
Tennessee	1,380	12,837	14,217
Virginia	5,849	--	5,849
W. Virginia	5,453	--	5,453
Wyoming	2,435	922	3,357
Total	701,223	130,948	832,171
Mean	41,248	16,368	46,232



TABLE E-18

SUBFUNCTIONS AS A PERCENTAGE OF FUNCTIONAL  
COST FOR #9 PAYMENT RECOVERY BY STATE

Subfunctions	Third-Party Recovery	Provider Recovery
States	(%)	(%)
Alabama	73.9	26.1
Alaska	100.0	--
Colorado	61.7	38.3
Connecticut	--	100.0
Dist. Columbia	100.0	--
Florida	100.0	--
Georgia	73.3	26.7
Iowa	69.2	30.8
Louisiana	22.4	77.6
New Hampshire	100.0	--
New Jersey	100.0	--
North Carolina	100.0	--
Pennsylvania	100.0	--
South Carolina	100.0	--
Tennessee	9.7	90.3
Virginia	100.0	--
West Virginia	100.0	--
Wyoming	72.5	27.5
Unweighted Mean	81.3	52.2
Weighted Mean	84.3	15.7



and Provider Recovery. Table E -17 shows the costs of Payment Recovery expenditures broken down by the two subfunctional areas as reported by eighteen jurisdictions. Table E - 18 displays the percentage breakdown by subfunctional area of total functional cost for each reporting state.

Third-Party Recovery. Seventeen states reported costs for third-party recovery. Pennsylvania reported the highest cost of \$183,442. Tennessee had the lowest reported cost in this subfunction (\$1,380). Ten of the reporting states attributed 100.0% of costs in this functional area to the Third-Party Recovery subfunction. Connecticut reported 0% in this subfunction.

Provider Recovery. Eight states reported costs in subfunctional area Provider Recovery. Georgia had the largest cost of \$42,629, while Connecticut attributed 100.0% of its functional costs to this subfunction. The ten states which reported 100.0% for Third-Party Recovery necessarily reported 0% in the Provider Recovery subfunction.

#### Fraud Control

The tenth Functional Area, Fraud Control, is divided into two Investigation and Prosecution. Investigation consists of all activities where potential fraud is suspected and continue until the case is disproven or brought to the attention of proper authorities. Prosecution consists of activities related to the prosecution of fraud cases in the Medicaid Program. Table E - 19 displays the breakdown of cost for fraud control and Table E - 20 shows the costs as a percentage of total fraud control costs.

Investigation. Fourteen states submitted investigation cost data. New Jersey reportedly spent the most revenue on investigation activities, \$182,408. This figure represents 100.0% of the revenue spent by New Jersey in this functional area. Seven other states reported figures representing 100.0% of the total revenue spent for fraud control.



TABLE E-19

SUBFUNCTIONAL COSTS FOR #10  
FRAUD CONTROL BY STATE

Subfunctions States	Investigation (\$)	Prosecution (\$)	Total (\$)
Alaska	800	--	800
Arkansas	3,092	--	3,092
Colorado	149,680	12,000	161,680
Connecticut	29,503	17,049	46,552
Florida	61,672	15,627	77,299
Georgia	69,928	--	69,928
Idaho	38,807	7,895	46,702
Massachusetts	50,018	673,800	723,818
New Hampshire	370	--	370
New Jersey	182,408	--	182,408
Pennsylvania	24,049	29,879	53,928
South Carolina	16,444	--	16,444
Tennessee	2,880	--	2,880
Wyoming	373	--	373
Total	630,024	756,250	1,386,274
Mean	45,002	126,042	99,020





TABLE E-20  
SUBFUNCTIONS AS A PERCENTAGE OF FUNCTIONAL  
COST FOR #10 FRAUD CONTROL BY STATE

Subfunctions States	Investigation (%)	Prosecution (%)
Alaska	100.0	--
Arkansas	100.0	--
Colorado	92.6	7.4
Connecticut	63.3	36.6
Florida	79.8	20.2
Georgia	100.0	--
Idaho	83.1	16.9
Massachusetts	6.9	93.1
New Hampshire	100.0	--
New Jersey	100.0	--
Pennsylvania	44.6	55.4
South Carolina	100.0	--
Tennessee	100.0	--
Wyoming	100.0	--
Unweighted Mean	83.6	38.3
Weighted Mean	45.4	54.6



Wyoming spent a low of \$373, the total expenditure for fraud control activities. Massachusetts reported spending \$50,018 or the lowest percentage of the subfunctional area cost (6.9%).

Prosecution. Six states reported prosecution costs. Of these states, Massachusetts spent \$673,800 or 93.1% of the functional area cost. Both of these figures represent the highest data reported. In total, Massachusetts spent \$723,818 on fraud control for the study period. Idaho had the lowest reported costs for prosecution, \$7,895, while eight states reported no expenditures for prosecution activities.

### Institutional Reimbursement

The eleventh functional area is Institutional Reimbursement. This area is divided into three subfunctional areas. The first, Rate Setting, includes the costs of state rate-setting commission allocable to Medicaid. The second, Hospital Cost Settlement and Audit, consists of activities related to the receipt and disposition of a hospital's cost settlement report to final settlement. Long-Term Care: Cost Settlement and Audit, the third subfunctional area, consists of activities related to the receipt and disposition of a LTC facilities cost settlement report. Table E -21 displays the subfunctional costs for institutional reimbursement and Table E - 22 shows these costs as a percentage of total institutional reimbursement costs.

Rate Setting. North Carolina reported the highest costs for rate setting at \$212,603 or 100.0% of the functional area cost. Two other states, Connecticut and Massachusetts, reported figures which were 100.0% of the total revenue spent for rate setting. Iowa reported the lowest figures at \$441, representing 1.0% of the functional area cost.



TABLE E-21

SUBFUNCTIONAL COSTS FOR #11  
INSTITUTIONAL REIMBURSEMENT BY STATE

Subfunctions States	Rate Setting (\$)	Hospital Cost Settlement & Audit (\$)	LTC Cost Settlement & Audit (\$)	Total (\$)
Alabama	5,001	19,680	135,904	160,585
Alaska	--	--	27,890	27,890
Arkansas	--	--	3,316	3,316
Colorado	31,273	51,747	55,040	138,060
Connecticut	19,852	--	--	19,852
Florida	79,202	39,601	39,601	158,404
Georgia	62,271	46,381	170,067	278,719
Idaho	2,975	7,500	33,600	44,075
Iowa	441	--	44,000	44,441
Louisiana	--	42,338	4,119	46,457
Massachusetts	11,122	--	--	11,122
New Hampshire	--	18,372	22,623	40,995
New Jersey	192,968	72,994	183,643	449,605
North Carolina	212,603	--	--	212,603
Pennsylvania	58,391	--	155,114	213,505
South Carolina	5,347	43,193	61,583	110,123
Tennessee	--	--	21,418	21,418
Virginia	1,783	8,542	25,058	35,383
West Virginia	--	33,083	12,741	45,824
Wyoming	--	253	872	1,125
Total	683,229	383,684	996,589	2,063,502
Mean	52,556	31,974	58,623	103,175



TABLE E-22

SUBFUNCTIONS AS A PERCENTAGE OF FUNCTIONAL  
COST FOR #11 INSTITUTIONAL REIMBURSEMENT  
BY STATE

Subfunctions States	Rate Setting (%)	Hospital Cost Settlement and Audit (%)	LTC Cost Settlement and Audit (%)
Alabama	3.1	12.3	84.6
Alaska	--	--	100.0
Arkansas	--	--	100.0
Colorado	22.7	37.4	39.9
Connecticut	100.0	--	--
Florida	50.0	25.0	25.0
Georgia	22.3	16.6	61.0
Idaho	6.7	17.0	76.2
Iowa	1.0	--	99.0
Louisiana	--	91.1	8.9
Massachusetts	100.0	--	--
New Hampshire	--	44.8	55.2
New Jersey	42.9	16.2	40.8
North Carolina	100.0	--	--
Pennsylvania	27.3	--	72.7
South Carolina	4.9	39.2	55.9
Tennessee	--	--	100.0
Virginia	5.0	24.1	70.8
West Virginia	--	72.2	27.8
Wyoming	--	22.5	77.5
Unweighted Mean	37.4	54.8	64.4
Weighted Mean	33.1	18.6	48.3





## Hospital Cost Settlement and Audit Cost Settlement

Hospital Cost Settlement and Audit Cost Settlement varied in cost from a low of \$253, by Wyoming, to a high of \$72,994, reported by New Jersey. Louisiana's 91.1% of the functional area cost was the highest reported, while the 12.3% reported by Alabama was the lowest. Eight states reported no expenditures for hospital and audit cost settlement.

LTC: Cost Settlement and Audit. New Jersey, Georgia, Pennsylvania and Alabama all report costs in this subfunctional area above \$100,000, New Jersey's \$183,643 being the largest cost reported. Wyoming reported the lowest cost, \$872. Alaska, Arkansas and Tennessee reported cost figures which represent 100% of costs in the area, while Louisiana reported the lowest percentage of 8.9%. Connecticut, Massachusetts and North Carolina reported no expenditures in this subfunctional area.



## F. COST BY TYPE

### Disaggregation of Total Costs into Personnel, Other Direct Costs and Indirect Costs

The preceding discussion centered around total costs for functional and subfunctional areas without regard to the nature of the items purchased by these expenditures. In reality, there is considerable value in examining variations in the expenditure patterns across the responding states. For example, states may administer certain areas with considerable variation in the mixes of personnel, equipment, expendable supplies, office space, etc. At some point it would be of interest to be able to examine possible relations between these mixes of inputs and various efficiency measures such as cost per Medicaid recipient.

Obviously the inputs into administering Medicaid must be described at a somewhat aggregated level. Our data collection effort asked the respondents to disaggregate their subfunctional area costs into Personnel Costs (salary and fringe), Other Direct Costs (both facility and non-facility related), and Indirect Costs (both facility and non-facility related).

Tables F-1 and F-2 display total Medicaid administrative costs by type in terms of actual costs reported and percent of total administrative costs. Direct costs include personnel (salaries, wages and fringe) and other direct costs, such as travel, supplies, postage and facility-related costs which are directly assignable to a particular functional area. For the 23 states included in this analysis, direct costs accounted for an average of 84.8% of total Medicaid administrative costs, with personnel costs comprising 55.5% of this amount.

Personnel costs ranged from \$48,048 (Wyoming) to \$10,971,222 (Pennsylvania), and accounted for from 26% (Wyoming) to 93.8% (Iowa) of total administrative costs. Total direct costs ranged from \$63,611 (Wyoming) to \$13,926,430 (Pennsylvania), and the percentage of total Medicaid administrative costs varied from 34.5% (Wyoming) to 100% (Iowa and Louisiana).



Twenty-three states reported indirect costs, which averaged 15.7% of total Medicaid administrative costs. This percentage ranged from 0.2% (Idaho) to 65.5% (Wyoming). Actual indirect costs reported varied from zero values (Iowa, Louisiana and North Carolina) to Florida's high of \$2,013,572.

Some specific anomalies in the data merit discussion here. Maryland had high values for non-facility related, other direct costs which possibly serves to distort their direct cost percentage of total costs. For example, \$1,482,589 of the \$1,637,915 total direct costs in beneficiary services were labeled Non-Facility Related, Other Direct. Massachusetts also had high values for Non-Facility Related Direct Costs especially in the Claims Processing area. For example, \$2,650,838 out of \$3,145,309 of Claims Processing Direct Costs fell in this category, and \$152,077 out of \$218,129. In total, over half of their Direct Costs were Non-Facility Related, Other Direct Costs.

Wyoming on the other hand apparently understated their personnel and fringe costs which caused their "total direct" percentage of total costs to be low. This is apparent because there are numerous areas where personnel (FTE's) are reported but no (or extremely low) salary costs are reported. For example, under Beneficiary Services 2.92 FTE's are reported but salary and fringe costs reported are only \$1,039. This implies an annual salary of only about \$1,200 per FTE.

The preceding discussion should give the reader the impression that not much confidence can be placed in many states' disaggregation of costs into direct or indirect categories. Our best guess is that reasonable values were reported by eight jurisdictions (Alaska, Colorado, Florida, Maryland, New Hampshire, Puerto Rico, South Carolina and West Virginia). If their data are averaged, a simple mean of about 77% of all administrative costs were expended on total direct costs leaving a simple average of 23% of costs expended on indirect costs. On a weighted cost basis the average (weighted) percentage of total cost incurred for the eight states listed above is 79.9%. Therefore, the impact of the size of the state Medicaid operation does not seem to have an appreciable effect on the direct cost percentage of total cost for this set of eight states.





TABLE F-1  
BREAKOUT OF COSTS DIRECT, INDIRECT, ETC.

Costs States	Total Cost	Personnel (Salary Plus Fringe)	Other Direct	Total Direct	Indirect
Alabama	2,409,660	834,657	1,555,003	2,389,660	20,000
Alaska <sup>1</sup>	437,455	225,562	28,771	273,372	164,083
Arkansas	1,713,321	1,036,272	397,906	1,434,178	279,143
Colorado	3,129,220	1,948,562	557,723	2,506,285	622,935
Connecticut	2,961,603	1,790,202	1,023,216	2,813,218	148,185
Dist. of Columbia	1,875,681	1,182,584	400,961	1,583,545	292,136
Florida	7,347,219	3,047,721	2,285,925	5,333,647	2,013,572
Georgia	4,820,555	2,751,940	1,807,634	4,559,574	260,981
Idaho	873,969	444,478	427,383	871,861	2,108
Iowa	2,635,889	2,472,015	163,874	2,635,889	-0-
Louisiana	3,044,575	3,044,575	-0-	3,044,575	-0-
Maryland	4,261,696	1,514,159	2,412,302	3,926,461	335,235
Massachusetts	6,895,434	2,824,432	3,197,260	6,021,692	873,742
New Hampshire	836,676	279,140	120,690	399,830	436,846
New Jersey	6,503,262	2,435,230	3,958,102	6,393,332	109,930
N. Carolina	6,066,764	1,315,853	4,750,911	6,066,764	-0-
Pennsylvania	14,332,031	10,971,222	2,955,208	13,926,430	405,601
Puerto Rico	916,612	787,996	60,560	848,556	68,056
S. Carolina	4,427,986	2,139,701	551,448	691,149	736,837
Tennessee <sup>2</sup>	2,727,865	1,310,941	372,037	1,772,234	14,533
Virginia	3,036,507	2,201,828	657,117	2,858,945	177,562
W. Virginia	1,343,970	999,783	207,180	1,166,963	177,007
Wyoming	184,475	48,048	15,563	63,611	120,864
Total	82,782,425	606,902	906,774	74,581,971	7,259,356
Unweighted Average	3,599,236	1,982,909	1,313,944	3,242,694	362,968
Median	2,961,603	1,514,159	657,117	2,635,889	292,136

1/ Total Direct includes \$19,039 (#6-H; Provider Services, Dental). Fiscal agent did not provide breakout data as to Personnel or Other Direct Costs for this amount.

2/ Totals do not add due to lack of breakout data provided.

Total Direct includes \$89,256 (#6E; Provider Services). Fiscal agent did not provide breakout data as to Fringe or Other Direct Costs associated with this category.





TABLE F-2  
COSTS BY TYPE IN PERCENTAGES

Costs States	Personnel	Other Direct	Total Direct	Indirect
Alabama	34.6	64.5	99.2	0.8
Alaska	51.6	6.6	62.5	37.5
Arkansas	60.5	23.2	83.7	16.3
Colorado	62.3	17.8	80.1	19.9
Connecticut	60.4	34.5	95.0	5.0
Dist. Columbia	63.0	21.3	84.4	15.6
Florida	41.5	31.1	72.6	27.4
Georgia	57.1	37.5	94.6	5.4
Idaho	50.9	48.9	99.8	0.2
Iowa	93.8	6.2	100.0	-0-
Louisiana	100.0	-0-	100.0	-0-
Maryland	35.5	56.6	92.1	7.9
Massachusetts	41.0	46.4	87.3	12.7
New Hampshire	33.4	14.4	47.8	52.2
New Jersey	37.4	60.9	98.3	1.7
North Carolina	21.7	78.3	100.0	-0-
Pennsylvania	76.6	20.6	97.2	2.8
Puerto Rico	86.0	6.6	92.6	7.4
South Carolina	48.3	35.0	83.4	16.6
Tennessee	48.1	13.6	65.0	0.5
Virginia	72.5	21.6	94.2	5.8
West Virginia	74.3	15.4	86.8	13.1
Wyoming	26.0	8.4	34.5	65.5
Unweighted Average	55.5	30.4	84.8	15.7
Weighted Mean	55.1	34.9	90.1	8.8



## G. SALARIES AND FULL-TIME EQUIVALENT PERSONNEL

This section is a discussion of the personnel assigned in each state to staff the various Medicaid administrative functions. Our discussion is somewhat limited by the data reported, and the reader is again cautioned not to attempt to make a simple extrapolation to the universe of Medicaid jurisdictions. Data reported is in the form of full-time equivalent staff (FTE's) employed in each of the twelve functional and numerous subfunctional areas. The only subfunctional area which was consistently not reported involved FTE's for fiscal agent claims processing (areas 7.A.2 and 7.B.2). Nearly every jurisdiction, (except Pennsylvania) reported some staffing data. However only eight jurisdictions (Colorado, District of Columbia, Florida, Georgia, Maryland, New Hampshire, West Virginia and Wyoming) reported staffing data for every functional area in which they show costs. We have restricted any analysis of staffing data to just those states who reported both cost and staffing data because of the probability that costs per FTE and total number of personnel employed may be distorted in those states which reported just the cost data (without staffing data) for certain functional areas.

The following table (Table G-1) shows, for each state, the functional areas in which cost data was submitted without personnel data (in FTE's). The states with the dashed lines represent those states (listed above) for which our subsequent analyses apply.

### Annual Salary Per FTE

Table G-2 displays, by functional areas, the average annual salary per FTE. The range covered by this salary data is rather large given that the highest average salary per FTE for a functional area is half again as large as the lowest average salary per FTE. For functional area #11, Institutional Reimbursement, \$16,927 was computed to be the average salary per FTE. Area #7, Claims Processing had the lowest average annual salary per FTE, \$10,877. Between these two, the other average salaries were distributed rather evenly with seven of the functional areas having salary averages of \$13-15,000 per FTE.



TABLE G-1

Total Personnel And Functional Areas  
Having Cost Data

Reported FTEs States	Total FTE's	Functional Areas With Cost Data But No FTE Data
Alabama	200.0	7
Alaska	38.8	2,3,6,10
Arkansas	418.3	11
Colorado	443.7	-----
Connecticut	500.0	2,6,10
Dist. of Columbia	259.7	-----
Florida	826.8	-----
Georgia	764.3	-----
Idaho	101.1	7
Iowa	533.3	7
Louisiana	-----	Could not determine FTE's for any Functional Areas
Maryland	452.5	-----
Massachusetts	671.5	7,11
New Hampshire	163.5	-----
New Jersey	478.9	3,6,7
North Carolina	140.0	2,3,7
Pennsylvania	-----	1,2,3,4,7,9,10,11
Puerto Rico	564.0	-----
South Carolina	480.8	2,7
Tennessee	321.6	11,12
Virginia	216.0	3
West Virginia	377.0	2
Wyoming	24.0	-----

Key:

1. General Administration
2. Training
3. Beneficiary Services
4. Quality Control
5. EPSDT
6. Provider Services
7. Claims Processing
8. S/UR
9. Payment Recovery
10. Fraud Control
11. Institutional Reimbursement
12. Non-Institutional Reimbursement



TABLE G-2

AVERAGE ANNUAL SALARY PER FTE BY  
FUNCTIONAL AREAS

Functional Areas	Average Annual Salary Per FTE(\$)	# of States Used To Derive
1. General Administration	15,591	21
2. Training	14,412	8
3. Beneficiary Services	13,682	14
4. Quality Control	11,927	18
5. EPSDT	14,298	18
6. Provider Services	13,754	17
7. Claims Processing	10,877	14
8. Surveillance and Utilization Review	14,654	19
9. Payment Recovery	13,265	18
10. Fraud Control	15,384	10
11. Institutional Reimbursement	16,927	15
12. Non-Institutional Reimbursement	13,869	6

\* The number of usable observations changes based on our editing/outlier analysis described in Section II.







It is probably useful to suggest reasons for the high salary areas. Fraud Control as defined for this study consisted of investigation and prosecution. It did not include the searching out of possible fraud situations. As such, it was a functional area that required a small number of personnel with specific skills. Obviously the staff needed to mount a successful prosecution will have to be highly trained professionals. The same is true for investigative staff. The skills of many diverse disciplines may be called upon during a fraud investigation. For these reasons the average salary per FTE for Fraud Control is relatively high.

General Administration, particularly the subcategory "Other", is a catchall for the entire administration of the Medicaid Program. Organizationally, many of the higher administrators do not have specific assignments which allow for the assignment of their time to specific functional areas. These usually are included under General Administration, Other. Additionally, the reports included under General Administration are completed by mid-level managers with minimal support. As a result of these factors, General Administration has one of the higher average salaries per FTE.

Institutional Reimbursement has the highest average salary per FTE for reasons similar to those affecting Fraud Control. It is not a labor-intensive effort but rather a functional area where a number of well-trained professionals perform the required tasks. These tasks include the setting of rates for hospitals and long-term care facilities, the settlement of claims and the auditing of these facilities. Activities of these kinds require more qualified personnel and therefore the average salary per FTE is higher.

The three functional areas on the lower end of the scale have a number of common attributes. Claims Processing (\$10,877), Quality Control (\$11,927), and Payment Recovery (\$13,265) are all areas that traditionally have been labor-intensive. This is changing as states move to automated systems but these areas still require a



great deal of manual support. The level of this support remains, basically, at the clerk and line manager level. More technically-oriented staff are being brought into these areas as automation becomes the rule, but their higher salaries are more than offset by the legion of clerks still needed to perform the tasks associated with these areas. For these reasons, these three functional areas have the lowest average annual salaries per FTE.

As a final look at salaries per full-time equivalent staff (FTE), we will examine the differences, if any, between salaries paid to claims processing employees in states with fiscal agents compared to in-house claims processing employee salaries. Data for the fiscal agent states was only available for three states (Florida (\$5,302), Iowa, (\$2,225), and South Carolina, (\$1,565), and their quarterly average salary per FTE is \$3,031. This implies an annual salary of \$12,123. The eight "In-House" processing states for which we had data reported a salary ratio of \$2,876 which implies an annual salary is \$11,504. Therefore, it would appear that the salaries paid administrative personnel in claims processing do not seem to vary according to whether the claims are processed by the state or by a fiscal intermediary. This observations is quite tentative, however, due to the small number of observations.



## FULL-TIME EQUIVALENT PERSONNEL

The reporting of full-time equivalent persons (FTE's) was critical to increasing the understanding of manpower allocations across administrative functions. Many of the states which responded provided as much FTE data as possible. The eight states listed on Table G-3 were able to report FTE data for each functional area in which they reported a cost. The other states, though providing cost data, did not submit complete FTE data and, therefore, they could not be used for this analysis.

In terms of gross FTE's, Florida and Georgia reported the largest totals: 826.8 and 764.3, respectively. The area consuming the most FTE's for each of these states was Beneficiary Services. Two other states also reported their largest concentration of employees in this area. The other four states on Table G-3 reported their highest allocations of FTE's in Claims Processing. The functional areas reporting the lowest number of FTE's employed varied from state to state (five different low areas for eight states). Training, however, was a consistently small area for total FTE's employed.

Table G-4 shows the FTE's reported in the previous table as percentages of the reporting state's total. The highest reported percentage of FTE's was 62% for Beneficiary Services in the District of Columbia. That number is probably biased because the District did not report costs for five of the functional areas. The second highest percentage reported was 45% of the FTE's allocated to Maryland's Claim Processing. With the exception of the District of Columbia reporting states had similar patterns of distribution for their FTE's.





TABLE G-3

## TOTAL FTE'S BY FUNCTIONAL AREA

Functional Areas	States								Average
	Colorado	District of Columbia	Florida	Georgia	Maryland	New Hampshire	West Virginia	Wyoming	
1. General Administration	6.73	2.20	10.20	25.40	45.00	27.10	16.00	2.00	16.83
2. Training	5.91	--	2.60	9.00	--	0.60	--	--	4.53
3. Beneficiary Services	79.16	161.80	290.00	219.10	78.00	40.40	132.00	2.92	125.42
4. Quality Control	4.54	11.30	27.00	21.30	10.00	9.79	33.00	2.43	14.92
5. EPSDT	67.49	--	27.00	68.80	6.00	4.00	3.00	4.32	25.66
6. Provider Services	61.12	24.30	232.50	82.70	65.50	22.40	57.00	.52	68.25
7. Claims Processing	116.75	24.90	150.00	200.30	175.00	48.10	121.00	6.70	105.34
8. Surveillance and Utilization Review	53.90	11.50	32.50	59.50	24.00	4.30	--	3.61	27.04
9. Payment Recovery	6.31	23.70	5.00	16.40	29.00	1.00	1.00	1.09	10.44
10. Fraud Control	22.75	--	14.50	13.70	16.00	.10	--	.05	11.18
11. Institutional Reimbursement	16.87	--	32.00	27.40	6.00	5.80	6.00	.14	13.46
12. Non-Institutional Reimbursement	2.19	--	3.50	21.70	.04	--	8.00	.22	5.94
TOTAL	443.72	259.70	826.8	764.30	454.54	163.59	377.00	24.00	





TABLE G-4

PERCENTAGE OF EIGHT STATES/FTE'S

Functional Areas	States										Weighted Mean	Unweighted Mean
	Colorado	District of Columbia	Florida	Georgia	Maryland	New Hampshire	West Virginia	Wyoming				
1. General Administration	2	1	1	3	12	17	4	8		4.06	6	
2. Training	1	---	0	1	---	0	---	---		0.55	1	
3. Beneficiary Services	18	62	35	29	20	25	35	12		30.28	30	
4. Quality Control	1	4	3	3	3	6	9	10		3.60	5	
5. EPSDT	15	---	3	9	2	2	1	18		5.42	7	
6. Provider Services	14	9	28	11	17	14	15	2		16.48	14	
7. Claims Processing	26	10	18	26	45	29	32	28		25.43	27	
8. Surveillance and Utilization Review	12	4	4	8	6	3	---	15		5.71	7	
9. Payment Recovery	1	9	1	2	7	1	0	5		2.52	4	
10. Fraud Control	5	---	2	2	4	0	-1	0		2.02	3	
11. Institutional Reimbursement	4	---	4	4	2	4	2	1		2.84	3	
12. Non-Institutional Reimbursement	0	---	0	3	0	---	2	1		1.08	2	



## H. OTHER INDICATORS

### Analysis of Administrative Costs as Percentages of Medical Assistance Payments and Cost Per Recipient

Table H-1 displays Medicaid administrative costs in relation to Medical Assistance Payments (MAP) and number of Medicaid recipients. This analysis provides a perspective on the magnitude of administrative expenditures. Administrative costs per recipient per month varied from a low of \$5.01 in Massachusetts to a high of \$36.27 in Alaska. In general, small states (characterized by low MAP and fewer than 100,000 recipients per month) had a higher ratio of administrative costs to MAP and a higher administrative cost per recipient per month. Alaska, Idaho and Wyoming are examples of this phenomenon. Large states, such as Massachusetts and New Jersey tended to have lower administrative costs per recipient per month and a lower percentage of administrative costs to total MAP.

We will now examine administrative costs incurred by the states as compared to the amount of Medical Vendor Payments paid out by each state. The data for this examination is also found in Table H-1. The fifth column reflects the percentage of Medicaid administrative Costs as compared to medical vendor payments for each state reported. There is considerable variation in these percentages with a range of 2.63% for Massachusetts to 9.17% for South Carolina. We urge caution in the use of the administrative cost/vendor payment ratio. A prudent investment in additional administrative dollars to prevent erroneous benefit payments tends to make this ratio look worse instead of better.

The variations in the administrative cost per recipient may relate to one or more explanatory variables. One of the more likely areas to examine is whether or not these percentages vary with the number of recipients. A simple test of this question is presented in Table H-2



TABLE H-1

## ADMINISTRATIVE COSTS AS A PERCENT OF MEDICAL ASSISTANCE

Costs States	Total Administration Costs for Quarter	Medical Assistance Payments (MAP)* Quarter	Average No. of Recipients Per Month**	Administrative Cost Percentages of MAP (%)	Administrative Costs Per Recipient Per Month (\$)
Alabama	2,409,660	69,747	158,802	3.45	5.06
Alaska	437,455	6,914	4,020	6.30	36.27
Arkansas	1,713,321	48,338	105,870	3.5	5.39
Colorado	3,129,220	38,826	61,965	8.1	16.98
Connecticut	2,961,603	72,065	106,473	4.1	9.27
District of Columbia	1,875,681	36,793	52,348	5.09	11.94
Florida	7,347,219	89,412	N.R.	8.21	--
Georgia	4,820,555	104,328	195,219	4.62	8.23
Idaho	873,969	11,268	17,007	7.75	17.12
Iowa	2,635,889	50,884	80,760	5.18	10.87
Louisiana	3,166,248	82,786	185,225	--	--
Maryland	4,261,696	82,918	111,229	5.13	12.77
Massachusetts	6,895,434	245,324	430,080	2.63	5.01
New Hampshire	836,676	15,136	20,283	5.52	7.18
New Jersey	6,503,262	172,571	306,202	3.76	7.07
North Carolina	6,066,764	87,703	157,850	4.87	9.03
Ohio	8,323,804	155,511	305,527	5.35	9.08
Pennsylvania	14,332,031	274,286	325,293	5.22	14.68
Puerto Rico	916,612	--	--	--	--
South Carolina	4,427,986	48,284	109,507	9.17	13.47
Tennessee	2,727,865	86,165	154,464	3.10	5.76
Virginia	3,036,507	72,673	126,878	3.93	7.50
West Virginia	1,343,970	26,240	70,055	5.12	6.39
Wyoming	184,455	2,923	2,851	6.31	21.56
Average	3,449,268	81,787	140,359	5.29	11.46

\* source: HCFA-64, second quarter FY 1979  
 note: 1. data are preliminary and unedited  
 2. in thousands of dollars

\*\* source: monthly recipients for January, February, and March ('79) as  
 reported on HCFA-120's  
 note: 1. data are preliminary and unedited



which shows two groups of observations of administrative cost per recipient and their respective rank number of recipients. The ranking assigns the low rank to the state with the largest recipient population, and so on. The observations are partitioned at the median cost per recipient value and the mean ranking of the corresponding set of recipient population sizes is found for each of the two groups of data. For the high cost per recipient group the mean size ranking is 16.1 whereas for the low cost per recipient state, the mean size ranking is 9.7. Although this test is not extremely rigorous, it does suggest that large cost per recipient states are associated with small recipient populations, and conversely for small cost per recipient states.





TABLE H-2

COMPARISON OF RANKINGS OF STATE'S ADMINISTRATIVE COST  
PER RECIPIENT VERSUS RANKING OF NUMBER OF RECIPIENTS

Observations Above the Median Cost			Observations Below the Median Cost		
State	Cost/ Recipient (\$)	Ranking of Recipient Population	State	Cost/ Recipient (\$)	Ranking of Recipient Population
Alaska	36.27	22	Ohio	9.08	5
Wyoming	21.56	23	N. Carolina	9.03	9
Idaho	17.12	21	Georgia	8.23	6
Colorado	16.98	18	Virginia	7.50	11
Pennsylvania	14.68	3	N. Hampshire	7.18	20
S. Carolina	13.47	13	N. Jersey	7.07	4
Maryland	12.77	12	W. Virginia	6.39	17
Dist. Columbia	11.94	19	Tennessee	5.76	10
Iowa	10.87	16	Arkansas	5.39	15
Connecticut	9.27	14	Alabama	5.06	8
			Massachusetts	5.01	2
Total		161			107
Mean Ranking of State's Recip- ient Population		16.1			9.7



## I. SPECIAL ANALYSES

This section includes discussion of five areas:

Eligibility Determination and Redetermination; EPSDT; Utilization Review; Claims Processing Workload; and Claims Processing Costs. Eligibility determination cost and staff ratios are examined by category. The range presented by reporting states is discussed. The cost per screening and the screens per quarter are investigated in the discussion on EPSDT. In an examination of workloads and costs in the utilization review process, the three types of reviews for each of the twelve categories of claims are dealt with briefly. The fourth part of this section enumerates each type of claim and presents information reported by state on claims paid and claims denied. The final section, I-5, analyzes claims processing in terms of the costs per line item.



### Analysis of Eligibility Determinations and Redeterminations

The areas of Eligibility Determination and Redetermination (Functional Areas 3A and 3B) were the subject of four specific workload data questions. These questions asked each jurisdiction to report the number of eligibility redeterminations made for "Aged, blind, disabled," "Other categorically eligible and "Medically needy" and, also, the number of eligibility redeterminations made. Only eleven states reported data extensive enough to include here, as shown in the following Table I-1-a. This table shows the determinations workload broken out into the three categories and the total number of redeterminations. Because these aggregate numbers will vary primarily due to the Medicaid population of the state, it is not meaningful to make comparisons of this data alone.

However, it does seem useful to examine one or two ratios which can be derived from the table. First, it would appear reasonable to expect a fairly constant ratio of determinations to redeterminations assuming the state has not had a large Medicaid population change during the average period of time between determination and redetermination. This ratio of redeterminations to determinations may also be expected to be approximated by the total sample ratio of 0.62 (i.e. 180,581/292,145). Looking at the individual state data we observe quite large variations about this mean value of 0.62. This ratio varies from 0.39 for Iowa to 7.60 for Georgia.

The row headed cost/determination reveals dollar amounts ranging from Florida's low of \$2.45 to Georgia's high of \$1354.08. Idaho and New Hampshire's figures fall approximately midway between these extremes. The costs per redetermination fall within a much narrower range of \$3.76 to \$57.03. Florida again represented the low end of the range while Georgia represented the high.



TABLE I-1-a  
ELIGIBILITY DETERMINATIONS AND REDETERMINATIONS  
BY CATEGORY BY STATE

CATEGORY \ STATES	Ark.	Colo.	D.C.	Fla.	GA.	Ida.	Iowa	MD.	N.H.	N.C.	Penn.	TOTAL
Initial Determinations	4,903	15,199	134,990	31,916	1,374	993	11,597	20,458	4,503	27,902	24,762	292,145
- Aged/Blind/Disabled	1,601	8,181	23,957	3,579	1,322	695	2,836	1,674	2,465	12,437	---	72,345
- Other Categorically Eligible	910	7,018	111,033	28,337	52	---	5,259	2,764	456	11,532	4,194	171,555
- Medically Needy	2,392	---	---	---	---	248	3,502	16,020	1,582	3,933	20,568	48,245
Redeterminations	5,076	22,692	---	101,196	10,436	1,094	4,526	9,810	1,847	23,904	---	180,581
Redeterminations Per Determination	1.04	1.49	---	3.17	7.60	1.10	0.39	0.48	0.41	0.86	---	0.62
Determination Costs (\$)	287,438	190,407	---	78,333	1,860,500	672,927	---	55,719	2,391,386	---	---	---
Redetermination Costs (\$)	21,389	285,618	---	380,837	595,194	---	---	---	22,901	---	---	---
Cost Per Determination	58.62	12.53	---	2.45	1354.08	677.67	---	2.72	531.07	---	---	---
Cost Per Redetermination	4.21	12.59	---	3.76	57.03	---	---	---	12.40	---	---	---





One interesting question regarding the eligibility determination function is whether the cost per eligibility rankings are consistent with the findings on determinations per full-time equivalent employee in the respective determination categories. Aged, blind, and disabled determination costs are less than categorically eligible costs. There was insufficient data to compare the medically needy category. Consistency in the current context implies that the lowest cost per det category (aged, blind and disabled) should relate to the highest number of determinations per full-time equivalent employee. A cursory glance at Table I-1-b illustrates that for the small number of sites for which data was available, there is the expected inverse relation between cost per determination and determinations per full-time equivalent staff person. These results should be viewed within the context of the very small sample size. However, the apparent consistency between low cost per determination and a high number of determinations per employee (and vice versa for the high cost per determination categories) is encouraging.

A comparison by states of the aged, blind, and disabled category and the categorically needy group reveals that the District of Columbia, Georgia, and New Hampshire have very similar rates. On the other hand, Colorado has a much higher cost per determination and lower number of determinations per FTE in the categorically needy area than in the aged, blind, and disabled area. The similarities in rates may reflect the method used by the states to complete the data forms. Total determination costs and workloads may have been calculated and divided by a common factor. This is likely since determinations probably require differing procedures by category.



PERCENTAGE CLAIM OF TOTAL, BY TYPE  
LINES PAID/DENIED BY STATE

CLAIM TYPES STATES	Pharmacy		Dental		Clinic		Lab. & Rad.		Home Health	
	% of Paid	% of Denied	% of Paid	% of Denied	% of Paid	% of Denied	% of Paid	% of Denied	% of Paid	% of Denied
ALABAMA	60.7	41.6	1.9	.6	--	--	1.9	2.8	.4	.3
ARKANSAS	64.0	--	1.9	--	1.5	--	--	--	.03	--
COLORADO	--	--	13.3	12.6	--	--	13.6	16.6	.3	.2
CONNECTICUT	6.1	--	.9	--	2.8	--	1.1	--	--	--
DISTRICT OF COLUMBIA	33.6	--	2.1	--	--	--	2.1	--	0.6	--
FLORIDA	44.4	9.4	2.5	1.3	--	--	.6	--	.3	--
GEORGIA	61.0	34	4.2	5.6	1.3	1.4	.3	.9	.98	.1
IDAHO	26.6	13.2	4.5	20.1	--	--	--	--	--	--
IOWA	35.3	--	4.9	--	--	--	--	--	.4	--
MARYLAND	51.6	--	3.7	--	--	--	--	--	.2	--
N. HAMPSHIRE	55.1	--	2.2	--	.9	--	1.3	--	1.0	--
S. CAROLINA	82.1	--	--	--	--	--	--	--	.3	--
TENNESSEE	51.3	--	1.0	--	1.4	--	1.1	--	.2	--
VIRGINIA	49.0	--	6.6	--	--	--	.3	--	.06	--
W. VIRGINIA	54.7	23.3	1.3	1.0	.1	--	.3	.4	1.3	3.8
WYOMING	--	--	--	--	--	--	.5	.6	.5	.1



TABLE I-1-b

COST PER DETERMINATION AND  
DETERMINATION PER FTE BY STATE

## A. Aged, Blind, Disabled

Category		
State	Cost per determination (\$)	Determination per FTE
Arkansas	-	-
Colorado	5.89	1048.8
Dist. Columbia	3.70	1640.8
Florida	54.32	83.2
Georgia	57.0	78.7
Idaho	-	-
Iowa	-	-
Maryland	-	-
N. Hampshire	12.38	224.1
N. Carolina	-	-
Pennsylvania	-	-
Unweighted Average	\$26.66	615.1

## B. Medically Needy

Category		
State	Cost per determination (\$)	Determination per FTE
Arkansas	-	-
Colorado	-	-
Dist. Columbia	-	-
Florida	-	-
Georgia	-	-
Idaho	-	-
Iowa	-	-
Maryland	-	-
N. Hampshire	\$12.39	222.8
N. Carolina	-	-
Pennsylvania	\$241.03	-
Unweighted Average	\$126.71	222.8



TABLE I-1-b (Cont'd)

## C. Other Categorically Eligible

Category State	Cost per determination (\$)	Determination per FTE
Arkansas	-	-
Colorado	20.27	305.1
Dist. Columbia	3.64	1674.7
Florida	-	-
Georgia	56.98	74.3
Idaho	-	-
Iowa	-	-
Maryland	-	-
N. Hampshire	12.25	228.0
N. Carolina	-	-
Pennsylvania	397.20	-
Unweighted Average	\$98.07	570.5





### Analysis of EPSDT Costs

Data on Administrative costs for EPSDT, number of screens per quarter and administrative costs per screen are displayed in Table I-2. The average administrative cost per screen for the 22 states included in this analysis was \$20.39. However, administrative cost per screen varied greatly across the states reporting. Five jurisdictions (Arkansas, Iowa, Louisiana, Puerto Rico, and Virginia) incurred administrative costs under \$1.00 per screen. In general, these states could all be classified in the middle range in terms of number of screens (e.g. 3,000 - 10,000). At the other end of the range two states, Alaska and Wyoming incurred extremely high costs per screen -- \$95.73 and \$168.80, respectively. Both of these states performed fewer than 2,000 screens during the quarter. However other states with a small number of screens, such as Maryland and New Hampshire, incurred administrative costs per screen which were close to the average.

Although the range of costs per screening is quite large (from \$0.46 to \$169.00), it is apparent that this measure should be adjusted for several factors before it can be used as a basis of comparison for efficiency in administering the EPSDT function. The principal difficulty is probably that administrative costs are relatively fixed while there are large fluctuations in the volumes of screens throughout the year and the additional variations caused by lags in reporting screening activity.



TABLE I-2

## EARLY PERIODIC SCREENING, DIAGNOSIS AND TREATMENT

STATE	Administrative Costs	Number of Screens for Quarter	Costs Per Screen
Alabama	19,786	11,034	\$ 1.79
Alaska	143,211	1,496	95.73
Arkansas	4,498	6,670	0.67
Colorado	417,212	9,135	45.67
Connecticut	230,329	10,114	22.77
Florida	141,278	18,499	7.64
Georgia	328,152	13,699	23.95
Idaho	N.A.	---	---
Iowa	2,385	3,485	0.68
Louisiana	8,207	9,915	0.83
Maryland	24,925	2,045	12.19
Massachusetts	193,023	46,213	4.18
New Hampshire	17,082	1,040	16.43
New Jersey	72,541	10,155	7.14
North Carolina	17,516	14,664	1.19
Ohio	60,265	9,637	6.25
Pennsylvania	1,090,661	42,501	25.66
Puerto Rico	4,563	9,992	0.46
South Carolina	32,497	11,975	2.71
Tennessee	12,835	12,552	1.02
Virginia	5,261	7,027	0.75
West Virginia	14,061	6,720	2.09
Wyoming	47,432	281	168.80
TOTAL	\$2,887,720	239,019	448.60
Unweighted Mean	\$ 131,260	10,865	\$ 20.39



### Analysis of Utilization Review Costs and Workload Data

We will now discuss both workloads and costs associated with utilization review. The relevant data for our discussion appears on the following Tables I-3-a and I-3-b. The first table (I-3-a) shows the total number of claims reviewed under each of the twelve claims categories for the fourteen states which reported any workload data in any of the categories. This information is separated according to whether the review is a "prior authorization or approval", a "professional pre-payment review" or a "post-payment review". In the prior authorization column the percentages of types of claims range from a high of 36% for the category designated "other" to a low of 0.06% (150) for outpatient hospital claims. In the professional pre-payment review category the highest percentage was pharmacy's 32% (43,187) while the lowest was the skilled nursing facility's 0.3% (353). The percentage of claims for physicians in the post-payment review column is the highest at 60% (1,315,165) while the clinic claims are at the other end of the range at 0.02% (378).

Table I-3-b shows costs, workload and average cost per line item reviewed for the three types of reviews across the fourteen reporting states. As is obvious at a glance, there is a very large amount of variation for a given review type across the set of fourteen states. This variation does not appear to be pronounced looking across the three review types within the same state. This fact argues for the idea that there are qualitative differences in the effort or process engaged in to review utilization and, until the definition of a review (in terms of functions performed) can be standardized, there seems little value in comparing these costs across states. Some obvious observations can be made from the data. Arkansas' cost per prior authorization is not typical because it is dominated by dental reviews. The District of Columbia's cost per review for both prior authorization and post-





REVIEWS: PRIOR AUTHORIZATION, PROFESSIONAL PRE-PAYMENT, AND  
POST-PAYMENT BY CLAIM CATEGORIES

TYPE OF CLAIM	TOTAL REVIEWS PRIOR AUTHORIZATION OR APPROVAL	PERCENTAGE OF TOTAL	TOTAL REVIEWS PROFESSIONAL PRE-PAYMENT REVIEW	PERCENTAGE OF TOTAL	TOTAL REVIEWS POST-PAYMENT REVIEW	PERCENTAGE OF TOTAL
Inpatient Hospital	1,049	0.4	4,133	3	143,604	6
Outpatient Hospital	150	0.06	1,524	1	259,775	12
Skilled Nursing Facility	6,968	3	353	.3	1,465	0.07
Intermediate Care Facility	31,469	12	4,094	3	8,900	0.4
Physician	29,213	12	39,549	30	1,315,165	60
Pharmacy	7,198	3	43,187	32	196,031	9
Dental**	82,164	33.2	4,262	3	56,122	2
Clinic	- *	-	-	-	378	0.02
Lab and Radiological	- *	-	4,117	3	2,161	0.1
Home Health	1,721	.08	-	-	7,501	0.3
Other	87,777	36	31,295	23	211,564	10
Cross Over	-	-	1,031	.8	0	-
TOTAL	247,709	100	133,545	100	2,202,666	100

\* Information was inadequate for this type of claim.

\*\*Arkansas, submitted a value of 123,000 for the dental claim type, We deleted this value because it was either erroneous or so atypical as to be misleading.





TABLE 1-3-b  
COST PER REVIEW BY REPORTING STATE

STATE	8.A. PRIOR AUTHORIZATION OF APPROVAL			8.B. PROFESSIONAL PRE-PAYMENT REVIEW			8.C. POST-PAYMENT REVIEW		
	TOTAL COSTS	CLAIMS REVIEWED	COSTS: CLAIMS REVIEWED	TOTAL COSTS	CLAIMS REVIEWED	COSTS: CLAIMS REVIEWED	TOTAL COSTS	CLAIMS REVIEWED	COSTS: CLAIMS REVIEWED
ARKANSAS	60,276	137,260	.44	—	21,600	—	—	15,023	—
COLORADO	220,026	54,871	4.00	23,090	19,552	1.18	111,136	16,385	.68
DISTRICT OF COLUMBIA	1,355	16,107	.08	—	—	—	60,980	2,138,161	.03
FLORIDA	14,389	7,459	1.92	67,331	—	—	66,541	—	—
GEORGIA	237,664	20,145	11.80	4,348	2,328	1.87	87,230	14,328	6.09
IDAHO	11,200	—	—	30,400	—	—	44,800	392	114.28
IOWA	1,372	3,965	.35	114	—	—	2,760	—	—
LOUISIANA	—	—	—	—	—	—	22,572	112	201.53
MARYLAND	94,121	24,258	3.88	23,734	—	—	19,738	10,290	1.92
NEW HAMPSHIRE	7,896	12,390	.64	2,423	—	—	2,423	42	57.69
NORTH CAROLINA	225,505	42,857	—	—	4,094	—	—	91	—
OHIO	231,616	16,184	—	—	4,232	—	—	4,783	—
SOUTH CAROLINA	28,466	1,617	17.60	32,479	2,174	14.94	129,832	3,009	43.15
VIRGINIA	—	33,675	—	—	79,565	—	—	50	—



payment review seems too low. On the other hand both Idaho and Louisiana seem high. Both states reported a very small number of reviews performed and left numerous rows blank. Therefore, it is probable that they understated the total number of reviews actually performed.



## Data and Analysis on Claims Processing Workload

Claims Processing is an area of particular interest to HCFA. Therefore an important part of this study was the collection of claims processing data comparable across states. Since there is no universally accepted definition of a claim, such a definition had to be established for this study. Our "standardized" claim was defined as any line item with a separate charge for which payment is sought. The Claims Processing Recap (See Appendix A) form was designed to collect data on paid and denied claims by applying our standardized definition. A paid claim was any line item for which payment was made. A denied claim was any line item for which payment was withheld either temporarily or permanently.



## Analysis of Claims Processing Cost and Claims Reviewed Data

Table I-4-a displays, by claim type, the total claims paid and denied for each of the sixteen states that submitted claims processing data. In gross terms, nearly 91 million claims were paid by these states during the first calendar quarter of 1979. However these data are somewhat distorted by the fact that Connecticut processed the majority of these claims (72 million). The bulk of Connecticut's claims were Inpatient Hospital (17 million) and Skilled Nursing Facilities (31 million). The large number of claims in Connecticut in a traditionally low volume claim type may have resulted from the listing of a large number of charges as being eligible for individual reimbursement rather than being included in a per diem rate. It must be remembered that this study defined a claim as a line item for which payment would be made.

Approximately 1.5 million claims were denied during the same period. Examination of Table I-4-a reveals that eight states were unable to provide claims denied data and two more supplied only partial claims denied data. In all, 62 state cells in Table I-4-a contain data for both paid and denied claims. Totaling just these cells results in 11,578,331 claims paid and a corresponding denial total of 919,151, a paid to denial ratio of almost 12.5 to 1. This is a more reflective ratio than the one resulting from the gross claims totals.

To avoid the confusion that may result from looking solely at the gross figures, each claim type by state is computed as a percentage of total claim types for that state. Table I-4-b displays these percentages for both paid and denied claims. For example Table I-4-b shows that in Alabama, 1.6% of the claims paid were inpatient hospital claims and 2.5% of the claims denied were inpatient hospital claims.

### Claim Types

Inpatient Hospital. Sixteen states reported data for inpatient claims paid. Connecticut reported 17 million claims paid or 23.7% of total claims paid, the highest number and percentage recorded for this claim type. Virginia reported that inpatient claims account for only 1.1% of total claims paid. Of





LINE ITEMS BY TYPE PAID AND DENIED BY STATE

Claim Types States	Inpatient Hospital		Outpatient Hospital		Skilled Nursing Facility		Intermediate Care Facility	
	Paid	Denied	Paid	Denied	Paid	Denied	Paid	Denied
Alabama	24,275	3,934	72,827	11,804	22,286	1,775	25,214	1,886
Arkansas	14,558	-	18,304	-	-	-	-	-
Colorado	7,335	578	35,415	2,145	11,398	167	25,370	373
Connecticut	17,081,904	-	3,201,961	-	31,507,584	-	5,673,584	-
District of Columbia	7,245	-	39,828	-	193	-	1,314	-
Florida	100,072	4,367	438,079	19,058	116,334	152	-	-
Georgia	179,219	62,336	201,362	50,592	968	0	1,782	0
Idaho	56,834	4,454	66,939	4,722	37,593	1,639	-	-
Iowa	47,000	-	899	-	555	-	55,219	-
Maryland	20,546	-	164,081	-	499	-	-	-
New Hampshire	2,896	-	11,631	-	571	-	13,127	-
South Carolina	14,497	2,383	56,639	4,624	9,080	-	18,840	-
Tennessee	43,550	-	87,710	-	2,203	-	70,867	-
Virginia	18,726	-	88,484	-	2,034	-	50,551	-
West Virginia	28,358	1,695	1,637	-	19	-	3,841	60
Wyoming	3,620	678	4,054	769	-	-	-	-



LINE ITEMS BY TYPE PAID AND DENIED BY STATE

Claim Types States	Physician		Pharmacy		Dental		Clinic	
	Paid	Denied	Paid	Denied	Paid	Denied	Paid	Denied
Alabama	319,176	61,120	889,973	64,583	28,036	1,025	-	-
Arkansas	146,293	-	635,258	-	18,796	-	14,743	-
Colorado	106,470	7,394	-	-	34,965	2,132	-	-
Connecticut	3,175,029	-	4,423,506	-	700,265	-	2,073,458	-
District of Columbia	191,986	-	193,782	-	12,324	-	-	-
Florida	1,991,393	91,809	2,405,698	78,329	137,093	10,747	-	-
Georgia	381,434	73,926	1,669,515	117,663	116,747	19,429	36,986	5,123
Idaho	636,925	81,513	346,205	22,543	58,689	34,282	-	-
Iowa	169,954	-	179,910	-	25,364	-	-	-
Maryland	268,539	-	570,627	-	40,786	-	-	-
New Hampshire	44,321	-	125,110	-	4,890	-	2,121	-
South Carolina	-	-	596,068	-	-	-	-	-
Tennessee	277,867	-	620,575	-	12,708	-	17,099	-
Virginia	378,406	-	819,991	-	110,023	-	-	-
West Virginia	86,332	6,992	195,615	3,115	4,735	128	357	-
Wyoming	14,902	2,848	-	-	-	-	-	-



TABLE 1-4-a (Cont'd)

## LINE ITEMS BY TYPE PAID AND DENIED BY STATE

Claim Types States	Lab and Radiology		Home Health		Other		Cross-Over	
	Paid	Denied	Paid	Denied	Paid	Denied	Paid	Denied
Alabama	28,312	4,348	6,053	526	48,672	4,267	-	-
Arkansas	-	-	318	-	47,212	-	96,159*	-
Colorado	35,805	2,829	887	44	5,190	1,307	-	-
Connecticut	793,195	-	-	-	3,434,450	-	-	-
District of Columbia	12,065	-	3,650	-	78,654	-	6,406	-
Florida	32,910	-	19,412	-	174,283	494	-	631,403*
Georgia	8,786	3,418	2,756	684	134,908	12,856	-	-
Idaho	-	-	-	-	-	-	94,723	21,039
Iowa	-	-	1,955	-	33,146	-	-	-
Maryland	-	-	1,663	-	38,500	-	-	-
New Hampshire	2,861	-	2,254	-	10,036	-	-	-
South Carolina	-	-	2,245	-	25,849	771	-	-
Tennessee	12,973	-	2,906	-	61,304	-	-	-
Virginia	5,519	-	1,075	-	198,055	-	-	-
West Virginia	1,021	47	4,509	506	8,361	809	-	-
Wyoming	124	28	138	4	918	218	1,836	64



TABLE 1-4-a (Cont'd)  
LINE ITEMS BY TYPE PAID AND DENIED BY STATE

Claim Types States	Buy-In		Total	
	Paid	Denied	Paid	Denied
Alabama	-	-	1,464,824	155,268
Arkansas	-	-	991,641	-
Colorado	-	-	262,835	16,969
Connecticut	-	-	72,064,936	-
District of Columbia	30,005	-	577,452	-
Florida	-	-	5,415,211	836,359
Georgia	-	-	2,734,463	346,027
Idaho	-	-	1,297,908	170,192
Iowa	-	-	509,002	-
Maryland	-	-	1,105,241	-
New Hampshire	7,163	-	226,981	-
South Carolina	2,695	-	725,913	7,778
Tennessee	-	-	1,209,762	-
Virginia	-	-	1,672,862	-
West Virginia	22,619	-	357,404	13,352
Wyoming	-	-	25,592	4,609





PERCENTAGE CLAIM OF TOTAL BY TYPE  
LINES PAID/DENIED BY STATE

CLAIM TYPES STATES	Inpatient Hosp.		Outpatient Hosp.		S N F		I C F		Physician	
	% of paid	% of Denied	% of Paid	% of Denied	% of Paid	% of Denied	% of Paid	% of Denied	% of paid	% of Denied
ALABAMA	1.6	2.5	4.9	7.6	1.5	1.1	1.7	1.2	21.7	39.3
ARKANSAS	1.5	--	1.8	--	--	--	--	--	14.7	--
COLORADO	2.8	3.4	13.4	12.6	4.3	.9	9.6	2.2	40.5	43.6
CONNECTICUT	23.7	--	4.4	--	43.7	--	7.9	--	4.4	--
DISTRICT OF COLUMBIA	1.3	--	6.9	--	0	--	0.2	--	33.2	--
FLORIDA	1.8	.5	8.0	2.3	2.1	.01	--	--	36.8	10.9
GEORGIA	6.5	18.0	7.3	14.6	.03	0	.06	0	13.9	21.4
IDAHO	4.3	2.6	5.1	2.7	2.8	.9	--	--	49.0	47.8
IOWA	9.2	--	.2	--	.1	--	10.8	--	32.4	--
MARYLAND	1.8	--	14.8	--	.04	--	--	--	24.3	--
N. HAMPSHIRE	1.3	--	5.1	--	.3	--	5.8	--	19.5	--
S. CAROLINA	2.0	30.6	7.8	59.4	1.2	--	2.6	--	--	--
TENNESSEE	3.6	--	7.2	--	.2	--	5.9	--	23.0	--
VIRGINIA	1.1	--	5.3	--	.1	--	3.0	--	22.6	--
W. VIRGINIA	7.9	12.7	.5	--	.0	--	1.1	.4	24.2	52.4
WYOMING	14.1	14.7	15.8	16.7	--	--	--	--	58.2	61.8



PERCENTAGE CLAIM OF TOTAL BY TYPE  
LINES PAID/DENIED BY STATE

CLAIM TYPES STATES	Pharmacy		Dental		Clinic		Lab. & Rad.		Home Health	
	% of Paid	% of Denied	% of Paid	% of Denied	% of Paid	% of Denied	% of Paid	% of Denied	% of Paid	% of Denied
ALABAMA	60.7	41.6	1.9	.6	--	--	1.9	2.8	.4	.3
ARKANSAS	64.0	--	1.9	--	1.5	--	--	--	.03	--
COLORADO	--	--	13.3	12.6	--	--	13.6	16.6	.3	.2
CONNECTICUT	6.1	--	.9	--	2.8	--	1.1	--	--	--
DISTRICT OF COLUMBIA	33.6	--	2.1	--	--	--	2.1	--	0.6	--
FLORIDA	44.4	9.4	2.5	1.3	--	--	.6	--	.3	--
GEORGIA	61.0	34	4.2	5.6	1.3	1.4	.3	.9	.98	.1
IDAHO	26.6	13.2	4.5	20.1	--	--	--	--	--	--
IOWA	35.3	--	4.9	--	--	--	--	--	.4	--
MARYLAND	51.6	--	3.7	--	--	--	--	--	.2	--
N. HAMPSHIRE	55.1	--	2.2	--	.9	--	1.3	--	1.0	--
S. CAROLINA	82.1	--	--	--	--	--	--	--	.3	--
TENNESSEE	51.3	--	1.0	--	1.4	--	1.1	--	.2	--
VIRGINIA	49.0	--	6.6	--	--	--	.3	--	.06	--
W. VIRGINIA	54.7	23.3	1.3	1.0	.1	--	.3	.4	1.3	3.8
WYOMING	--	--	--	--	--	--	.5	.6	.5	.1



PERCENTAGE CLAIM OF TOTAL BY TYPE  
LINES PAID/DENIED BY STATE

CLAIM TYPES  STATES	Other		Cross-overs		Buy-in	
	% of Paid	% of Denied	% of paid	% of Denied	% of Paid	% of Denied
ALABAMA	3.3	2.7	--	--	--	--
ARKANSAS	4.8	--	9.7	--	--	--
COLORADO	1.9	7.7	--	--	--	--
CONNECTICUT	4.8	--	--	--	--	--
DISTRICT OF COLUMBIA	13.6	--	1.1	--	5.2	--
FLORIDA	3.2	.05	--	75.4	--	--
GEORGIA	4.9	3.7	--	--	--	--
IDAHO	--	--	7.3	12.3	--	--
IOWA	6.5	--	--	--	--	--
MARYLAND	3.4	--	--	--	--	--
N. HAMPSHIRE	4.4	--	--	--	--	--
S. CAROLINA	3.6	9.9	--	--	.4	--
TENNESSEE	5.1	--	--	--	--	--
VIRGINIA	11.3	--	--	--	--	--
W. VIRGINIA	2.3	6.1	--	--	6.3	--
WYOMING	3.5	4.7	7.1	1.4	--	--





the sixteen states reporting, fourteen stated that this claim type accounted for less than 10% of total claims paid and eleven states fixed it a less than 5% of their total. Only Wyoming (14.1%) joined Connecticut above 10%. This may have been due to ancillary cost billings and their handling but that remains unclear.

Eight states reported denied claims for this claim type. They ranged from 0.5% to 30.6% of their total denied claims. The limited number of reporting states and the partial nature of the claims denied data limits the discussion of this data (for all claims types) to descriptive observation.

Outpatient Hospital. Sixteen states supplied outpatient claims paid data. Wyoming had the highest rate, 15.8% of total claims paid while Iowa had the lowest, 0.2%. Ten states put outpatients claims paid between 4% and 8% of total claims paid. Seven states had at least 3.5 times as many outpatient claims paid as inpatient. Interestingly, three states (Iowa, Connecticut and West Virginia) paid more inpatient hospital claims than outpatient hospital claims. This is surprising for it represents a large deviation from the expected norm, which can not be adequately explained.

Seven states provided claims denied data. Outpatient claims denied ranged from 2.3% of total claims denied to 59.4%. The second highest rate was Wyoming's 16.7%.

Skilled Nursing Facilities. Fourteen states reported SNF claims paid data. Once again Connecticut provided data that fell outside of anticipated ranges. SNF claims paid represent 43.7% of the total claims paid in Connecticut. Among the reporting states Colorado had the second highest rate 4.3%. Six states reported SNF claims paid as equal to or less than one-tenth of one percent of claims paid. Twelve states reported less than 3% of their paid claims were SNF claims. It would appear that either Connecticut's data is incorrect or that there is a fundamental difference in the definition of a claim line item used in that state.





Five states provided claims denied data for pharmacy. Alabama, Georgia and West Virginia provided complete denial data for each claim type. Their denial rates for pharmacy claims (41.6%, 34% and 23.3%) may be good indications of the range of pharmacy claims denied in other jurisdictions

Dental. Fourteen states supplied claims paid data for dental claims. Colorado put dental at 13.3% of total claims paid (the highest reported) and Tennessee set it at 1%, the lowest. Connecticut was the actual low at 0.9% but previously discussed reporting problems make this number suspect. Six states provided claims denied data.

Clinic. Six states provided data on clinic claims paid. They ranged from 0.1% of total claims paid to 2.8%. Georgia was the only state to provide claims denied data (1.4%).

Lab and Radiology. Eleven states supplied lab claims paid data. Colorado was highest with a 13.6% rate. The remaining states were clustered below 2%. Five states provided claims denied data.

Home Health. Fourteen states provided claims paid data for this claim type. West Virginia had the highest rate 1.3% while Arkansas' was lowest, totalling less than one-tenth of one percent. Five states provided claims denied data.

Other. Fifteen states reported claims paid data in the catch-all category "Other". The District of Columbia had the highest rate 13.6%. Seven states provided claims denied data for the claim type "Other".

Cross-Over/Buy-In. Five states provided cross-over data, while three supplied buy-in data. Little can be drawn from these observations.

A final observation on claims denied should be added. The data was sketchy, but in states that submitted thorough denial data by type, the percentage of total denials were about the same as the paid claims by type (taken as a percentage of total paid claims). This means that the ratio of paid to denied for any claim type is



about the same for any other claim type. If that is the case then the errors are occurring at random and are chance errors. That would hardly seem possible given all the interacting forces that can cause a claim to be denied. Further consideration would be necessary to resolve this question.



## Cost per Claim Processed by Type of Claim

This section examines claims processing costs defined as cost per line item and attempts to explain variations in these costs in terms of several behavioral factors. The following Table I-4-c shows the cost per line item of claim for the thirteen claim types across the eleven different jurisdictions. Note that Colorado appears twice because they submitted cost and workload data for both in-house (IH) and fiscal agent (FA) claims processing work. For most states there is a wide variation in cost per line item of a claim processed. The weighted average cost per claim ranges from \$0.02 to \$1.15 with the median value of \$0.72 and a simple mean for all eleven states of \$0.64<sup>1</sup>. Neither of these statistics consider the wide range in proportions of claims processed by type of claim which will be the subject of a subsequent analysis.

Looking at cost per line item for each of the categories, we can separate the set of respondents into three groups. Arkansas, Colorado, Florida, New Hampshire, South Carolina, West Virginia and Wyoming all report similar weighted average costs ranging from \$0.29 to \$1.15 with little variation across line items or within each state. Ohio is alone in reporting consistently low costs ranging from two cents to fifty cents per line item. Both the District of Columbia and Georgia have low weighted average costs, but their cost per line item vary drastically from \$0.04 to \$10.85 and \$0.35 to \$9.76, respectively.

<sup>1</sup> These statistics exclude consideration of Colorado's In-House observation because it represents only the (inexpensive) pharmacy claims.



TABLE I-4-C  
COST PER CLAIM PROCESSED BY TYPE OF CLAIM

	Arkansas (FA)	Colorado (FA)	Colorado (III)	District of Columbia (III)	Florida (FA)	Georgia (III)	Iowa (FA)	New Hampshire (III)	Ohio (III)	South Carolina (III)	West Virginia (III)	Wyoming (III)
Inpatient Hospital	0.81	2.08	-	10.85	1.29	0.35	-	1.01	0.05	1.50	1.07	0.70
Outpatient Hospital	0.81	1.72	-	0.40	0.96	0.52	-	0.87	0.07	0.54	1.08	0.62
Skilled Nursing Facility	-	1.75	-	5.04	0.87	9.73	-	0.81	0.50	1.05	2.02	0.88
Intermediate Care Facility	-	1.75	-	4.95	0	9.76	-	0.81	-	0.57	1.07	0.88
Physician	0.81	1.80	-	0.12	0.95	0.44	-	0.89	0.02	-	1.07	1.07
Pharmacy	0.48	-	.24	0.04	0.53	0.40	-	0.82	0.02	0.16	1.07	-
Dental	0.81	0.58	-	0.14	0.97	0.42	-	0.83	0.05	-	1.07	-
Clinic	0.80	-	-	-	0	0.45	-	0.90	0.04	-	1.07	-
Lab Radiology	-	0.81	-	0.07	0.86	0.43	-	0.86	-	-	1.09	0.93
Home Health	2.72	2.00	-	0.13	0.76	0.45	-	0.85	-	1.19	1.07	0.96
Other	0.81	2.04	-	0.09	1.02	0.43	-	0.83	0.04	1.33	1.07	0.86
Cross-Overs	0.03	0.62	-	0.36	-	-	-	-	0.22	-	-	0.51
Buy-in Premiums	0.08	-	-	0.06	-	-	-	0.76	0.13	0.77	1.07	-
<u>Weighted</u>												
<u>Mean</u>	0.57	1.15	0.24	0.25	0.77	0.42	1.14	0.84	0.02	0.29	1.07	0.90





## Analysis of Fiscal Agent versus In-House Claims Processing Cost per Line Item Processed

As a final area of analysis for claims processing, we will now examine cost per line item of claims processed and attempt to explain variations in these data in terms of several behavioral factors. The following table (Table I-5) presents these costs for the states which presented adequate data. It can be seen that the data is in two groups of five and six states, depending upon whether the state has their claims processed by a "fiscal agent", or processes them "in-house", respectively.

For the five states with "fiscal agent" contracts for claims processing work, the range of cost per line item runs from about \$0.38 to \$1.14 per line item. The mean value for these six states is \$0.73 per share.

For the six states in which we have data for "in-house" claims processing costs, the range is from about \$0.05 to about \$0.89 per line item. The mean value for these six states is about \$0.59 per line item if the lowest (\$0.05) per line item observation is retained. However, if this low observation is dropped, the mean increases to \$0.650. Hence, given the small sample sizes involved, it is not obvious that there is a significant difference in the claims processing cost per line item between those processed by a fiscal agent and those processed in-house. The resolution of this question requires a larger sample size and the ability to adjust for intervening factors. We examine one of these intervening factors (type of claim processed) in the next paragraph.

It is generally accepted that pharmacy claims are less expensive to process than most other types of claims. Therefore, a state with a larger than average number of pharmacy claims should be expected to have a lower than average cost per claim processed. We further examined this pattern by stratifying the cost per claim solely on the basis of percent of pharmacy claims. Table I-5 shows that Ohio, with a \$0.05 cost per line item, has the greatest percentage of pharmacy claims (75%). We stratified this sample by using the median



percentage as the partition (cut-off) point for low and high percentages of pharmacy claims. When the costs per line item associated with this partitioning are examined, it appears that the states with the higher than median percentages of pharmacy claims have lower than median costs per claim (i.e., \$0.58 per claim versus \$0.74 per claim). This is reasonable preliminary evidence that the "type" of claim processed has a predictable impact on costs.

With more observations, a regression cost model could be developed which estimates the actual cost impact of varying proportions of different types of claims processed. Such a cost model could be developed from a general model in which cost per line item is assumed to vary according to the number of claims processed, the price of input factors (primarily wages), the proportionate mix of claims processed and "other variables" reflecting who is doing the claims processing and other institutional factors. This product mix could be expressed as several variables representing the proportions of claims processed from several of the major health care provider types (e.g., inpatient care, outpatient care, pharmacy, long term care, etc.). With a well estimated model of claims processing costs, numerous questions (concerning the optimal size of the operation, relative efficiency of one processor versus another adjusted for differences in types of claims processed, etc.) could be addressed.



TABLE I-5

COST PER CLAIM  
FISCAL AGENT VS. IN-HOUSE<sup>1/</sup>

Fiscal Agent States

STATE	Claims Processing Cost (\$)	Number of Line Items Processed	Cost per Line Item (\$)	Per Cent Pharmacy Claims
Alabama	1,028,228	1,464,284	0.702	61%
Florida	4,171,508	5,415,274	0.770	44%
Iowa	579,866	509,002	1.139	35%
Tennessee	778,821	1,209,762	0.644	51%
Virginia	642,763	1,672,862	0.384	49%
MEAN			0.728	48%

In-House States

District of Columbia	381,294	577,452	0.660	34%
Georgia	1,339,788	2,734,463	0.490	61%
Idaho	204,985	324,477	0.632	27%
Maryland	978,984	1,105,241	0.836	52%
New Hampshire	190,837	226,981	0.847	55%
Ohio	1,123,989	24,046,506	0.047	75%
MEAN			0.594	51%

<sup>1/</sup> Classifications into "Fiscal Agent" or "In-House" made on basis of information from "Data on Medicaid Program", 1978, Table 70, p.94.





## J. CONCLUSIONS

After having presented in some detail the data and selected analyses from the twenty-three respondents, we will discuss some of the major conclusions which can be drawn in this chapter. The total of over \$82 million spent by the reporting states for Medicaid administration was broken down by functional area. Beneficiary Services accounted for expenditures of 34.7% of the total while Claims Processing accounted for 29.1%. The two functional areas utilizing the smallest percentages of Medicaid administrative costs were Non-Institutional Reimbursement (0.4%) and Training (0.8%).

The reporting jurisdictions were examined for comparisons of their administrative costs. Pennsylvania showed the highest quarterly total: \$14.3 million, which represents 17% of the total Medicaid administrative expenditures for this set of states. The significance of this statement must be qualified by pointing out that several of the jurisdictions which expend the largest amounts on administrative costs did not respond to our survey and are not included in this analysis. In addition, for those states which responded incompletely, there is the possibility that the proportions spent in each functional area are somewhat biased due to a state's lack of data in all functional areas. In our analysis of percentage expenditures by functional area, we minimized this bias by examining the data and omitting the observations which were obvious outliers.

The discussion of functional area costs by state revealed that the range of percentages of the total spent on the functional areas varies widely. For example, the percentages spent for Beneficiary Services ranged from Puerto Rico's high of 71% to Alaska's low of 1%. However, Alaska's data appears suspect because they reported costs in only one subfunctional area.

The area to use the second largest share of administrative resources, Claims Processing, also displayed a very wide range. Florida reported that 57% of its costs were expended in this area while Puerto Rico spent only 2%.

Non-Institutional Reimbursement the smallest area, displayed the most narrow range. Tennessee reported the high value of 4% while





several states reported zero expenditures. However, there was a very high rate of invalid reporting for this category. Training, which also consumed a small percentage of administrative costs, displayed a similarly narrow range of values (6% to 0%) and, again, there was a relatively high rate of non-reporting.

These two low areas are not included in the discussion of sub-functional costs, since they are not disaggregated to that level. However, the remaining ten areas were analyzed by subfunctional costs. This analysis points out the relative importance of activities within each function. Since the area of Claims Processing was a special focus of this study, it will be singled out for some remarks here. Claims Processing costs were divided in two ways for separate analyses. The first break-down involved the costs designated as developmental as opposed to operating costs. In both areas the mean costs were higher for states employing fiscal agents than in those performing in-house processing. However, the number of states reporting in this area was very small. The second area of Claims Processing analysis (cost per line item) will be discussed at the end of this section.

In the area of disaggregated costs by type of expenditure (Personnel, Other Direct and Indirect) the results of the data collection indicated that many states could not effect a reasonable apportionment into these categories. However, when we eliminated states whose data we felt was questionable, the resulting proportion of costs (about 76%) spent on direct versus indirect items appeared to be reasonable. Unfortunately, this finding is based on only ten states or about one-fifth of all Medicaid jurisdictions. For these states, there is some indication that the size of the recipient population did not have an appreciable effect on the proportion of costs expended on indirect cost items.

The data collected on personnel costs and full-time equivalent employees yielded information on relative salaries and resources devoted to the twelve functional areas. Salaries paid to administrative employees were, on average, the highest for Institutional Reimbursement (\$16,927), General Administration (\$15,591), Fraud Control (\$15,384) and SUR (\$14,654). Claims Processing had the lowest



average salary per FTE at \$10,877. The other seven functional areas all paid salaries averaging in the thirteen to fifteen thousand dollar range. Reasons for this salary structure are postulated in the text. Finally, salaries for claims processing employees in states with in-house processing were compared to those of states with fiscal agent claims processing. For the small sample of states analyzed, there did not appear to be any difference between these two groups in salaries paid to their employees.

Data on personnel (in FTE's) used to staff all of the twelve functional areas was available for only eight states. For these states, the average of the percentages of personnel used in the three large functional areas was found to be 29.5% for Beneficiary Services, 26.8% for Claims Processing and 13.8% for Provider Services on an unweighted basis. Both General Administration and SUR used approximately 6% of the total manpower.

Merging the administrative cost data collected here with number of recipients per state allowed us to analyze the "administrative burden" of each state's Medicaid program and to postulate on how this burden varies with the size of the program. Based on an unstandardized non-parametric test, which appeared to be the most rigorous that the small sample would allow, the ratio of administrative burden appears to decrease for states with the larger Medicaid recipient populations.

The analysis of eligibility determinations and redeterminations was somewhat hampered by inadequate reporting. We did, however, suggest a way of examining expenditures in these two areas. Using this method we found that two states apparently spend significantly less on the redetermination function than the other three states in the analysis. In addition, it was reported that "aged, blind and disabled" determinations cost less than "categorically needy" determinations, although analyses of eligibility determination costs will remain incomplete until AFDC and SSI administration costs are brought into consideration. The relative cost of "medically needy" determinations could not be established due to low reporting rates.



The cost per determination and number of determinations per FTE are inversely related for our small sample thus lending some confidence to results of the cost magnitudes.

The information received on EPSDT costs allowed us to compare costs per screen. The average administrative cost per screen was found to be \$20.39 with data ranging from less than a dollar per screen to nearly two hundred dollars per screen. The two states with very high cost per screen each had a very low volume (less than 2,000 screens). Since the range of costs per screen is quite large, it is apparent that this measure should be refined before it can be used as a basis of comparison for efficiency in administering the EPSDT function. The large range of costs per screen probably stems from the relatively fixed nature of EPSDT administrative costs and the large fluctuations in reporting of screening activity.

Our Claims Processing workload analysis was again somewhat hampered by a poor response rate. Upon totaling the data for just those cells having both "paid" and "denied" entries, we derived a paid to denied ratio of about 12.5 to 1. The proportion of claims paid for inpatient hospital ranged from 0.1% to 23.7%. However, 90% of the respondents reported less than 10% of their claims in this category. This was also the case for Outpatient Hospital, SNF, Dental Clinic, Lab and radiology, Home Health, Other and Cross-Overs. Not surprisingly, the largest proportion of claims processed is for pharmacy claims. For the twelve "believable" state data submissions, the mean proportion indicates that the average state had 53% of their claims in the area of pharmaceuticals.

Our final analysis in this chapter investigated another aspect of Claims Processing - that of fiscal agent versus in-house costs. We found that the line item costs were roughly equal for those states doing their processing either in-house or through a fiscal agent. This conclusion should be regarded as extremely tentative because of both the small number of observations involved and the difficulty of identifying "true" outliers in samples of this (small) size. In addition, it appears that a large proportion of pharmacy





claims tends to be related to a lower than average cost per line item. The ideal way to address the two questions raised here (i.e. influence of fiscal agent and a high proportion of pharmacy claims on cost per line item) would be through a fully specified multiple regression cost model. Unfortunately, our small sample size precluded this sort of analysis.





APPENDIX A



STATE:

FUNCTIONAL AREA	DIRECT COST						INDIRECT COST		TOTAL COST	FTE PERSONS
	PERSONNEL COST		OTHER DIRECT COST		TOTAL DIRECT COST	FACILITY - RELATED	NON-FACILITY-RELATED	TOTAL DIRECT COST	FACILITY-RELATED	NON-FACILITY-RELATED
	SALARY	FRINGE								
1. General Administration										
A. Federal Statistical Report.										
B. Federal Financial Reporting										
C. State Internal Reporting										
D. Planning and Policy										
E. Auto. Data Processing (ADP)										
F. Other General Admin.										
2. Training										
3. Beneficiary Services										
A. Eligibility Determination										
(1) aged/blind/disabled										
(2) other categor. needy										
(3) medically needy										
B. Eligibility Redetermination										
C. ADP										
D. Other Beneficiary Services										



MEDICAID ADMINISTRATIVE COST MATRIX

STATE:

FUNCTIONAL AREA	DIRECT COST						INDIRECT COST		TOTAL COST	FTE PERSONS
	PERSONNEL COST		OTHER DIRECT COST			TOTAL DIRECT COST	FACILITY-RELATED	NON-FACILITY RELATED		
	SALARY	FRINGE	FACILITY - RELATED	NON-FACILITY RELATED						
4. Quality Control										
A. Eligibility Review										
B. Third-Party Liability Rev.										
C. Claims Processing Review										
5. EPSDT										
A. Informing and Notification										
(1) Automated										
(2) Manual										
B. Outreach										
C. Case Management/Follow-Up										
(1) Automated										
(2) Manual										
D. General EPSDT Admin.										
6. Provider Services										
A. Physician										
B. Pharmacy										
C. HMO										
D. Hospitals										
E. ITC Fac.: Certification										



STATE:

FUNCTIONAL AREA	DIRECT COST					TOTAL DIRECT COST	INDIRECT COST		TOTAL COST	FTE PERSONS
	PERSONNEL COST		FRINGE	OTHER DIRECT COST			FACILITY-RELATED	NON-FACILITY-RELATED		
	SALARY			FACILITY - RELATED	NON-FACILITY-RELATED					
6. Provider Services (cont.)										
F. LTC Facil.: MR/IPR										
G. LTC Facilities: Other										
H. Dental										
I. Other Providers										
J. ADP										
7. Claims Processing										
A. Developmental Costs										
1. In-House:										
a) hardware (devel. share)										
b) software development										
c) site prep. and other...										
d) info. systems planning										
2. Contracted:										
a) hardware (devel. share)										
b) software development										
c) site prep. and other...										
d) info. systems planning										
B. Operating Costs										
1. In-House:										
a) hardware (operating)										
b) maintenance software										
c) data entry										
d. computer operations										
e. manual claims processing										





STATE:

FUNCTIONAL AREA	DIRECT COST						INDIRECT COST		TOTAL COST	FTE PERSONS
	PERSONNEL COST		OTHER DIRECT COST			TOTAL DIRECT COST	FACILITY-RELATED	NON-FACILITY-RELATED		
	SALARY	FRINGE	FACILITY - RELATED	NON-FACILITY-RELATED						
7. CP Operating Costs (cont.)										
2. Contracted:										
a.hardware (operating)										
b.maintenance software										
c.data entry										
d.computer operations										
e.manual claims processing										
8. Surveillance and Util. Rev.										
A. Prior Author./ Approval										
B. Profes. Pre-Pay. Review										
C. Post-Payment Review										
D. ADP										
9. Payment Recovery										
A. Third-Party Recovery										
B. Provider Recovery										
10. Fraud Control										
A. Investigation										
B. Prosecution										
11. Institutional Reimbursement										
A. Rate Setting										



STATE:

FUNCTIONAL AREA	DIRECT COST						INDIRECT COST		TOTAL COST	FTE PERSONS
	PERSONNEL COST		OTHER DIRECT COST		TOTAL DIRECT COST	FACILITY-RELATED	NON-FACILITY-RELATED			
	SALARY	FRINGE	FACILITY - RELATED	NON-FACILITY-RELATED						
11. Institutional Reimbursement (cont.)										
B. Hosp. Cost Settle. & Audit										
C. LTC Cost Settle. & Audit										
12. Noninstitutional Reimb.										
- - - - -										
TOTAL										

Direct Cost Items:

Indirect Cost Items:

Indirect Cost Allocation Formula:



STATE:

## CLAIMS PROCESSING RECAP SCHEDULE

in-house  
fiscal agent

Type of Claim/Service	distributed manual cost 1	number of paid line items 2	average number of characters per line item 3	total number of characters 4	percent of total characters 5	distributed data entry cost 6	percent of total paid line items 7	distributed hardware, software, & operations costs 8	total claim processing operating costs 9	cost per paid line item 10	number line den 11
Inpatient Hospital											
Outpatient Hospital											
Skilled Nursing Facility											
Intermediate Care Fac.											
Physician											
Pharmacy											
Dental											
Clinic											
Lab and Radiological											
Home Health											
OTHER											
Cross-overs											
Buy-in premiums											
<u>TOTAL</u>					100		100				



## OTHER WORKLOAD DATA

## A. Surveillance and Utilization Review Workload

This data is intended to give an account of S/UR workload by type of review and by type of claim or service, so as to give a more detailed look at what the costs reported on the cost matrix (functional area #8) represent.

type of claim	number of line items requiring:		
	prior authorization/ or approval	professional pre-payment review	post-payment review
Inpatient Hospital			
Outpatient Hospital			
Skilled Nursing Facility			
Intermediate Care Facility			
Physician			
Pharmacy			
Dental			
Clinic			
Lab and Radiological			
Home Health			
OTHER			
Cross-over			
TOTAL			

Does the State have a PSRO doing Utilization Review in any of the above areas?

\_\_\_\_\_

If so, which one(s)? \_\_\_\_\_





B. Eligibility Workload

So that costs per determination and per redetermination can be compared, we wish to collect the following data:

1. Number of eligibility determinations -

aged, blind, disabled \_\_\_\_\_

other categorically needy \_\_\_\_\_

medically needy \_\_\_\_\_

for which Medicaid is incurring a cost.

2. Number of eligibility redeterminations \_\_\_\_\_

for which Medicaid is incurring a cost.



V. Other Workload Data

A. Surveillance and Utilization Review Workload

This data is intended to give an account of S/UR workload by type of review and by type of claim or service, so as to give a more detailed look at what the costs reported on the cost matrix (functional area #8) represent.

type of claim	number of line items requiring:		
	prior authorization, or approval	professional pre-payment review	post-payment review
Inpatient Hospital		.	
Outpatient Hospital			
Skilled Nursing Facility			
Intermediate Care Facility			
Physician			
Pharmacy			
Dental			
Clinic			
Lab and Radiological			
Home Health			
OTHER			
cross-over			
TOTAL			

Does the State have a PSRO doing Utilization Review in any of the above areas?

If so, which one(s)?





CMS LIBRARY



3 8095 00014148 7